LOCKWOOD MEMORIAL
SEP 29 1958
LIBRARY

American Perfumer AND AROMATICS

COSMETICS
TOILETRIES
SOAPS

•

FLAVORS
AEROSOLS

•

ESSENTIAL OILS

SEPTEMBER 1958

THE MAGAZINE OF TASTE AND SCENT

THE LOCKWOOD MEMORIAL LIBRARY

Story of Cordials . . . Page 33 • Christmas Packaging . . . Page 56

UNGERER . . . your guide to the ultimate in fine fragrance

Ungerer & Co.

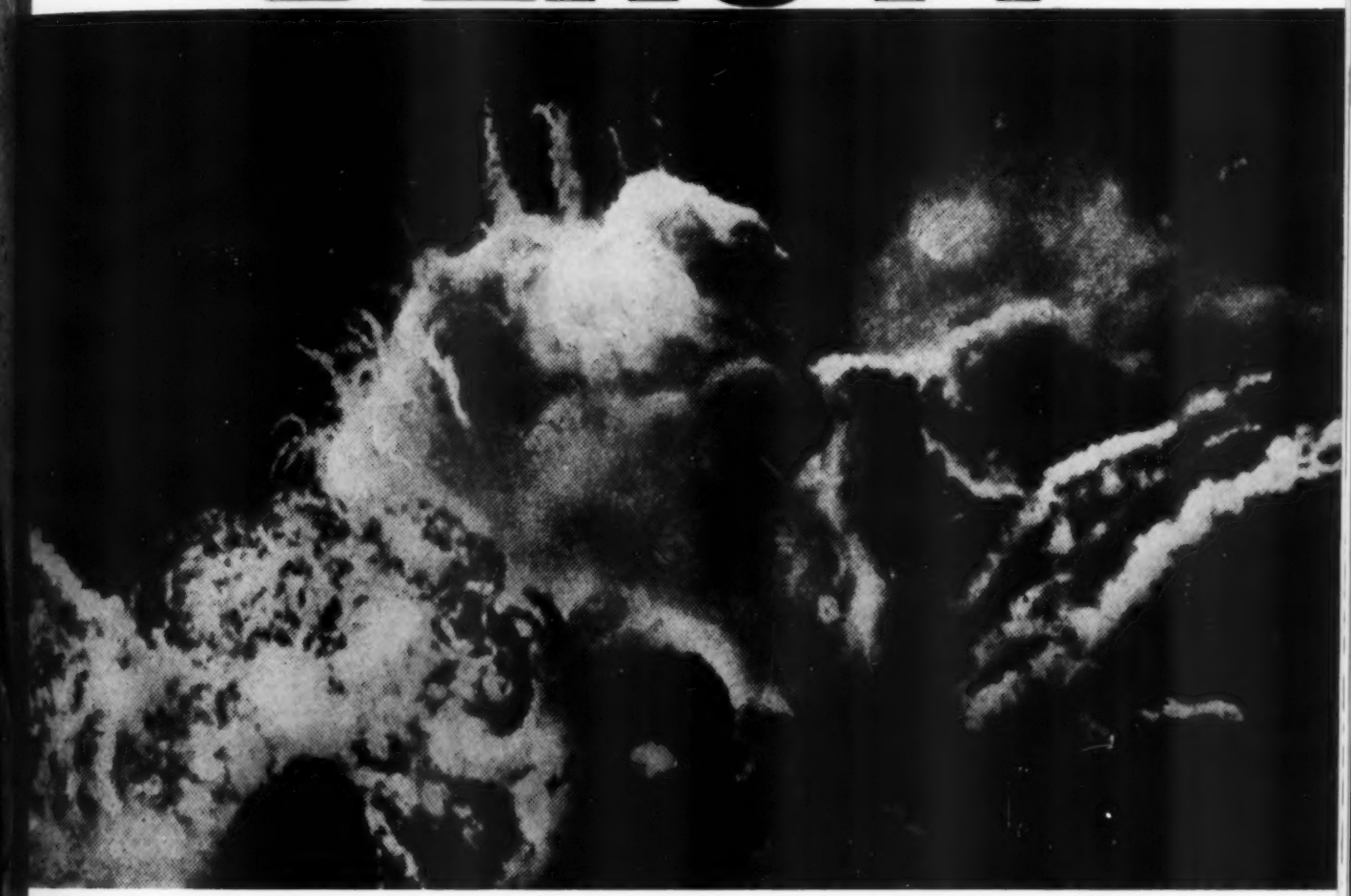
Ungerer, Vidal-Charvet
Paris, France

HOME OFFICE: 161 Avenue of the Americas,
New York 13, N. Y.

plant and laboratories Totowa, N. J.

CHICAGO • BOSTON • PHILADELPHIA • ST. LOUIS • LOS ANGELES • ATLANTA

BLAST!



...when a blasting job is indicated!

Bouncing paper-wads off a stone wall has no break-through power whatsoever.

But the "block-buster" technical editor deNavarre engineered for our **SUPER October SURFACTANT** emphasis issue was planned for *lasting* as well as blasting power.

What more could you ask for your advertising dollar?

Symbol of "in-depth" editorial coverage

REMEMBER, OCTOBER IS *THE* ISSUE!

AMERICAN PERFUMER AND AROMATICS

48 West 38 Street, N. Y. 18 • LOngacre 5-3320

WAVEMASK 30

works magic with home permanents

The new Synfleur fragrance WAVEMASK 30 can help cure even your most difficult case in home permanent formulation.

WAVEMASK 30, based on essential oils and aromatic chemicals, carefully tested for stability, compatibility and solubility, is an artistic formulation developed out of long and intensive Synfleur research.

In practical application, it has proven itself as practically a panacea to cold wave preparation odor problems. Additionally, it can be adapted as a basic fragrance for effective use in other thioglycolate products requiring similar masking treatment.

The Synfleur laboratories staff will be glad to assist you on your masking problems with samples, data or other help, without obligation.

Synfleur

SCIENTIFIC LABORATORIES, INC.
MONTICELLO, N. Y.

ATLANTA • DETROIT • LOS ANGELES • NEW YORK • SAN FRANCISCO • MEXICO, D. F. • HAVANA • MONTREAL • Guatemala City • San Salvador • San Pedro Sula
Managua • San Jose • Panama • Barranquilla • Medellin • Bogota • Caracas • Maracaibo • Rio de Janeiro • Buenos Aires • Santiago

New York Sales Office: Telephone Plaza 7-1960

American Perfumer AND AROMATICS

VOL. 72, NO. 3 • SEPTEMBER 1958

Contents

RESEARCH

A Pharmacologist Delves in Cosmetics ..... *Dr. John H. Draize* 45
Significant observations by a government expert

Evaluation of Shampoos .. *Dr. H. Henken, S. R. Goff, Dr. M. A. Goldberg, E. Jarmus, R. P. Heavy, Dr. V. M. Volar, M. Zeitlin* 39
Committee report on laboratory methods for product testing

PRODUCTION

The Fascinating Story of Cordials ..... *Victor G. Fourman, Ph.D.* 33
Various types and how they are made—Field for use broadening

Scientific Formulation of Cosmetics ..... *Paul G. I. Lauffer, Ph.D.* 49
Factors for cosmetic chemist to consider

MANAGEMENT

Christmas Packaging 56
Some outstanding packages designed for the Christmas market

DEPARTMENTS

News 9, 69
Desiderata 19
Questions and Answers 13
Chemical Abstracts 64
Packaging and Promotion 54
Aeroscripts 12
New Products and Ideas 63
Market Reports 81
Index to Advertisers 82

COVER: Athens-Acropolix-Parthenon, Greece. Courtesy of the Royal Greek Embassy Press & Information Service.

OFFICES

LOS ANGELES
McDonald - Thompson, Richard Eubanks, 3727 W. Sixth Street, Los Angeles 5, Calif. Dunkirk 7-5391

SAN FRANCISCO
McDonald-Thompson, Morton McDonald, 625 Market Street, San Francisco 5, Calif. Yukon 6-0647

CHICAGO
Peoples Gas Building, 122 So. Michigan Ave., Chicago 3, Ill.

FORT LAUDERDALE
E. L. Neff, 2808 Middle River Drive, Fort Lauderdale, Florida. LOgan 6-5656

Please address all mail to: AMERICAN PERFUMER AND AROMATICS, 48 West 38th St., New York 18, New York, U.S.A.

JAMES H. MOORE, Jr. *President*
M. G. DE NAVARRE *Technical Editor*
WM. LAMBERT *Editor*
JOHN H. MULLER *Vice President and Business Manager*
WALTER M. BONE *Assistant Editor*
A. van der SHAW *Art Director*
WINSTON H. REED *Aerosol Editor*
ROBERT E. SANFORD *Circulation Director*
MARY HARRIS *Advertising Production Mgr.*

PUBLISHED MONTHLY by Moore Publishing Company, Inc. Publication office: Emmett St., Bristol, Conn., U.S.A. Editorial and Executive Offices: 48 W. 38th St., New York 18, N.Y. J. H. Moore, Jr., President; Harold W. Springborn, Vice President; G. R. Brennan, Secretary. Subscription Rates: U.S.A., Possessions and Canada, $5 one year; 50¢ per copy. Foreign, $15 one year. Entered as second class matter, January 12, 1950, at the Post Office at Bristol, Conn., under act of March 3, 1879. Moore Publishing Co., Inc., is publisher also of Gas Age, Gas Appliance Merchandising, Industrial Gas, LP-Gas and Brown's Directory of American Gas Companies.
(Cable Address: Robinpub, N. Y. Volume 72, No. 3.

Copyright 1958, Moore Publishing Co., Inc.)

On the line for '59

From what I see, hear and read these days, I am encouraged to give you a briefing on some of the facets of our expanded Fall '58—early '59 editorial program.

Yes, it appears that our economy is definitely shaking off this period of readjustment. In fact, many segments of industry, including the publishing and advertising field, are emerging stronger and healthier as a result.

But getting back to our stepped-up program; first, we have coming in October a special emphasis issue updating the use of SURFACTANTS. A broad subject, to be sure, but technical editor deNavarre and some twelve co-authors have done a masterful job.

In early '59, "PRESERVATION AND ANTIOXIDANTS" will be given in-depth editorial treatment. The improvement of cosmetic shelf-life and stability is a subject that literally has been aching for documentation of current practice and method.

Next in line is a special study right in step with the latest technological trend in developing "Therapeutic Cosmetics"; a vast new area to be explored and brought into focus.

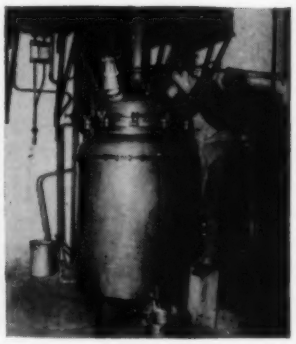
Probably no other industry leans so heavily on packaging as a promotional device as the cosmetic industry. Seasonal and special packaging techniques and materials will form the basis of another feature issue. Also to be implemented and brought up to date will be Aerosol packaging.

These are some of the high-spots of our accelerated program which also will be reflected in our basic editorial job and in improved appearance of the American Perfumer and Aromatics.

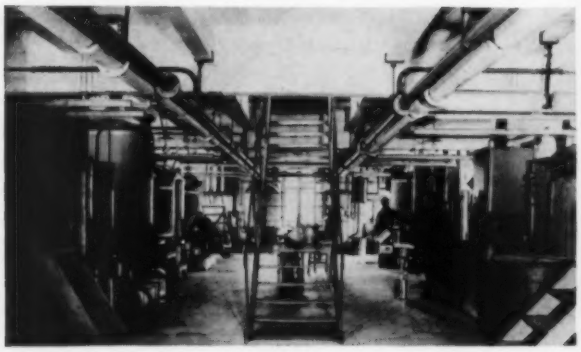
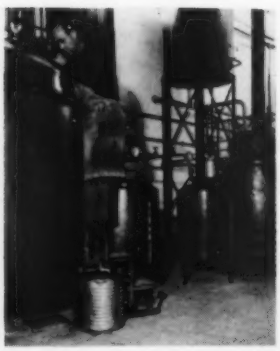
If you get the impression that I am enthusiastic about the immediate future of our country's economy and about the ability of the cosmetic industry to grow and prosper accordingly, you are very right. I might even say I am inspired! All in all it looks like an exciting and challenging year coming up for the American Perfumer and Aromatics.

James H. Moore, Jr.
Publisher

CAPACITY



QUALITY

for the finest in floral and essential oils

BERTRAND FRÈRES, INC.
443 FOURTH AVE. NEW YORK 16, N.Y.

Whatever your anti-perspirant product . . . is geared to your requirements!

THREE SAFE, EFFECTIVE, EASILY INCORPORATED TYPES FIT EVERY PRODUCT VARIETY

For CREAMS, LOTIONS, SPRAYS and POWDERS:
CHLORHYDROL
(aluminum chlorhydroxide complex)
Available in 5 forms . . . granular, fine, medium, impalpable, 50% W/W solution.

For GELS:
CHLORHYDROL S-5
(aluminum chlorhydroxide complex—modified)
In solid form for alcohol type . . . grease and gum free gels.

For STICKS:
CHLORACEL
(sodium aluminum chlorhydroxy lactate complex)
Available as a 40% W/W solution for use in making Cologne type sticks.

REHEIS ANTI-PERSPIRANT CHEMICALS OFFER ALL THESE ADVANTAGES

- effective anti-perspirant action
- fine deodorant qualities
- non-destructive to fabrics
- non-irritating to skin
- no buffering required

Write for free data and samples

FINE REHEIS CHEMICALS

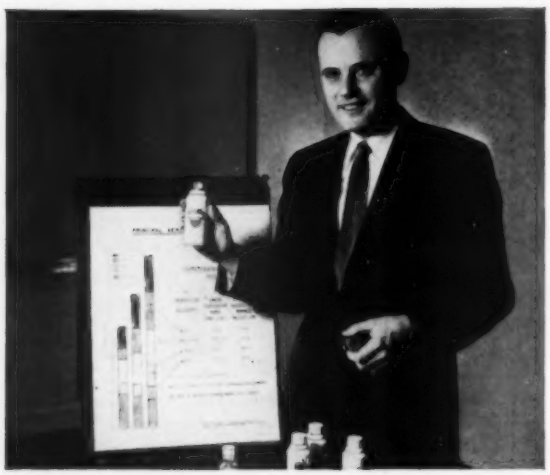
REHEIS COMPANY, INC.
Manufacturers of Fine Chemicals
BERKELEY HEIGHTS · NEW JERSEY

3960

TO AEROSOL MARKETERS... *Present and Prospective...*

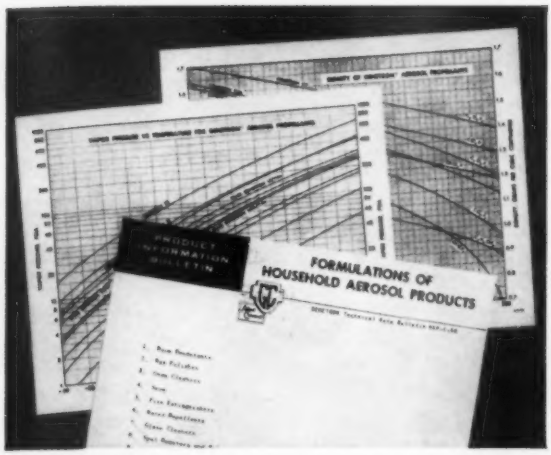
GENERAL CHEMICAL OFFERS THESE HELPFUL SERVICES

Expert Technical Service, Formulation Assistance. General Chemical has one of America's finest aerosol laboratories—completely equipped for testing and development work. Its services have guided many aerosol marketers in their development programs and are readily available to you. With General Chemical's help you may be able to save time and money in arriving at a compatible aerosol formulation of your product for evaluation and final testing by your own research and marketing experts.



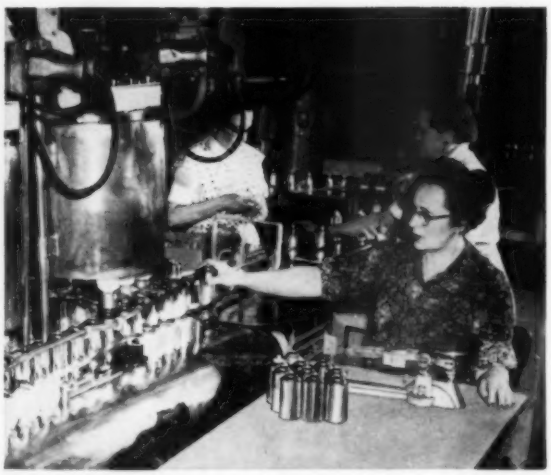
Market Data. General Chemical has prepared a fact-packed marketing and sales presentation to help you in a preliminary survey of the aerosol field and in planning your marketing program. It includes sales projections for aerosol and non-aerosol segments of many markets, prepared by our Market Surveys Department, as well as a host of other helpful facts and figures. To arrange for a special presentation, simply call or write General Chemical's "Genetron" Department.

GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N. Y.



Technical Data. General Chemical offers technical information ranging from the physical properties of "Genetron" propellants to formulation data—including many new and promising formulations developed or tested in our laboratories. Rapid strides in aerosol chemistry and technology have rendered obsolete many of yesterday's "conclusions" about the economics and practicality of aerosol packaging for certain products. We will be glad to review such products with you in light of current knowledge. Ask to be put on our mailing list for new technical bulletins.

Basic "How To" Manuals. Two free booklets are available on request. *"How to Push Up Profits with Aerosols"* contains valuable market and technical data . . . reliable sources for contract filling, aerosol containers of every type, valves, etc. . . . brief descriptions of the complete line of "Genetron" aerosol propellants. *"Genetron Aerosol Propellants"* is a more technical manual, with extensive data on the physical properties of "Genetron" propellants and mixes, technical service, commercial filling methods and other topics of interest to the aerosol manufacturer.



Field Assistance. General's aerosol experts are always available to help solve problems involving the storage and handling of propellants in your plant and filling line. You may find it profitable to discuss your filling line operation with a General Chemical technical representative, from point of view of operating efficiency and economy, propellant handling, etc. Technical manuals on storage and handling of "Genetron" aerosol propellants are available on request.

A Full Line of Aerosol Propellants. All standard fluorinated hydrocarbon propellants and mixes are available in the "Genetron" line—also special propellant mixes where unusual properties are required. The "Genetrons" provide the right propellant for virtually *every* aerosol need . . . are first choice of many leading fillers and marketers for formulating household, drug, cosmetic, agricultural, industrial and other types of aerosol products. Write today for further information.

Allied Chemical

genetron®
AEROSOL PROPELLANTS

Putting the "push" in America's finest aerosols

Here's a new and distinctive perfume oil concentrate that adds high-fashion appeal to your popular-priced products. A delightful floral fragrance that's equally at home in perfumes, toilet waters, creams, powders and talcums. FLORDINE possesses all the necessary fixative properties to make it long-lasting in the finished products. Only 8.50 per pound.

FLORDINE

PERFUME OIL CONCENTRATE
FOR PERFUME, TOILET WATER,
CREAMS, POWDERS and TALCUMS

AROMATIC PRODUCTS, Incorporated

235 Fourth Avenue, New York 3
CHICAGO • DALLAS • MEMPHIS • PITTSBURGH • LOS ANGELES • BOSTON

Specialists in the creation of perfume odors exclusively!

LAST MINUTE NEWS . . .

Funds Sought to Aid FTC in Policing Dentifrice Ads

The subcommittee of Congress of which Representative John Blatnik is chairman which blasted dentifrice manufacturers for exaggerated claims in their advertising and held that the commission had failed to perform its statutory duty in stopping such misleading advertising is seeking to get Congress to give the FTC the kind of budget and manpower it needs to properly regulate misleading claims. The funds will be sought in the next session of Congress.

$1,200,000 Cosmetic Plant to be Built in Israel by Revlon V.P.

A $1,200,000 cosmetic and pharmaceutical plant is to be built in Israel by Marlon Products Inc. a new company owned 60% by Mark D. Soroko, a vice president of Revlon, Inc., New York. It is planned to build the plant this year and the Israeli government is to lend $700,000 for the construction of the plant. According to plans the company will export around 80% of its output to 19 middle eastern nations under exclusive rights from Revlon.

Faberge Charges Revlon with Marketing Lipstick Imitations

Revlon, Inc., Charles Revson and the Princess Marcella Borghese Inc. are charged with conspiracy to compete unlawfully and unfairly in an action filed by Juliette Marglen Inc. a subsidiary of Faberge Inc. In the complaint filed in the U. S. District Court for the Southern District of New York, Marglen charges Borghese, a corporation allegedly subject to the control of Revlon, Inc., marketed imitations of Juliette Marglen's unique oval lipstick case and other products. Marglen further charges that soon after it created and marketed a nail polish formulated from 24-carat gold, Revlon placed on the market a nail polish which it falsely claimed to be both the "first nail polish made from gold" and "formulated from gold." As a result it is charged that these acts have created confusion in the minds of consumers with regard to the identity of the products designed by Marglen. A preliminary and permanent injunction restraining Borghese from packaging and selling lipstick or nail polish in containers similar to those of Marglen is sought and an injunction enjoining Revlon from advertising that its nail polish is formulated from 24-carat gold. The injunction also seeks to enjoin Borghese from claiming that its products are derived from the beauty formulas of the Borghese princesses or that its lipstick case is derived from an Italian design or that such case was used in Italy prior to its use in the United States. An accounting of profits, triple damages and court costs are sought against the defendants. It was charged that Mr. Revson, president of Revlon, Inc. learned the business plans of Marglen while negotiating for the purchase of Faberge Inc. in 1956 which negotiations fell through.

Canada Limits Claims for Royal Jelly in Cosmetics

The Food and Drug Directorate of the Dept. of National Health and Welfare of the Dominion of Canada has issued a bulletin to wholesale and retail druggists on the advertising of royal jelly. The bulletin, No. 163, says in part: "During the past two years the advertising of royal jelly for various conditions has shown a marked increase. A survey of the scientific literature has revealed that a number of analyses of royal jelly has been made and the investigations conducted on its possible therapeutic value to humans. However, to date no conclusive results have been reported. In view of Sect. 9 (1) of the Food & Drugs Act which reads as follows 'No person shall label, package, treat, process, sell or advertise any drug in a manner that is false, misleading or deceptive or is likely to create an erroneous impression regarding its character, value, quantity, composition, merit or safety', objection is taken to any claims whatsoever being made for this substance until satisfactory clinical evidence is submitted to substantiate them. Up to the present no such evidence has been presented. When used as a cosmetic, or as an ingredient in a cosmetic, the claims must be restricted to those permitted by the Act which are for cleansing, improving or altering the complexion, skin, hair or teeth."

The Four R's of Sound Business Practice

The Executive Newsletter of the National Wholesale Druggists' Assn. in its latest issue offers sound advice to manufacturers who sell through retailers. It says: "In the light of cautious retail purchasing policies, manufacturers and wholesalers will have to figure on carrying stores to a greater-than-usual degree this season. Consider these precautionary steps: *Re-check* your orders to suppliers. *Review* inventory levels. *Re-figure* your financial needs for the whole season and *Recall* customers and suppliers periodically to keep ahead or re-orders and avoid getting caught by sudden bottlenecks in supply.

New Hair Straightener in Aerosols for Negro Market

Marla Ann Products Co., Co., 7125 Manchester St., St. Louis 17, Mo., has introduced nationally Glamour Spray, a new hair conditioner which is claimed to eliminate old procedures for straightening the hair of Negroes. The product is packed in an aerosol and was developed by William Essbern a French research chemist.

Bubbling Milk Bath Added to Cosmetest Inc. Line

A bubbling milk bath named Marly has been launched by Cosmetest Inc., New York, manufacturers of bubble bath powders and bubble bath oils. The product is claimed to be derived from milk and to contain vitamins and selected proteins. It is also said to have an emollient action for softening and soothing the skin. It is stated that 18 months of research were required to develop the product. It comes in two sizes 32 oz. for the 100 bath size which retails for $3 and a 25 bath size which retails for $1. Both are packed in apothecary type jars.

Procter & Gamble Report Record Earnings for Year

The Procter & Gamble Co. reports record sales and earnings for the fiscal year ended June 30 despite the recession. Consolidated net sales were $1,295,163,269 and consolidated net earnings were $73,196,618 which was almost nine million dollars above the previous year.

Dr. Ernest Guenther to be Honored by American Perfumers

The American Society of Perfumers at its meeting in the Advertising Club October 15 will present a bronze placque to Dr. Ernest Guenther, vice president and technical director of Fritzsche Brothers Inc. honoring him for his notable work in the field of essential oils. At the same meeting Dr. Guenther will lecture and show his color sound movie film on the production of essential oils in Africa. Dr. Guenther familiarly known as "Mr. Essential Oil" is the author of the outstanding work "The Essential Oils" in six volumes and also his numerous contributions to scientific journals. He has spent years traveling all over the world investigating the production of essential oils in all phases at primary sources. The vast information he assembled, coupled with his scientific research work, resulted in the production of his monumental work where the most authoritative information on essential oils is presented in an orderly way.

Why Retail Sales People Do Not Do a Better Sales Job

With the feeling that retail sales people could do a better job of selling the National Cash Register Co. sent out its own representatives into the field to make a survey. Each representative was given $5 and instructed to buy a bottle of aspirin *and anything else suggested by the retail sales people, up to the $5 limit.* Every one of the representatives, according to Tide Magazine, returned with a bottle of aspirin and change. Not one retail sales clerk made a suggestion for buying another article.

Over 13 Million Dollars for Suggestions from Employes

According to a report just issued by the National Assn. of Suggestion Systems, Chicago, which has 1163 members representing business and government, last year 434,375 suggestions submitted by employes were adopted and used. For these, employes were paid $13,956,841 as a reward. Employes of the American Can Co.'s Canco division were paid $51,387 in cash awards last year—more than double the rewards paid in the previous year. One of the awards was $10,000. The Eastman Kodak Co. which also follows the enlightened policy of encouraging employes to make suggestions for improving efficiency and offering practical ideas paid one of its employes $23,495 for an idea. Last year also the U. S. Steel Corp. paid employes over $190,000 for making good suggestions. Employes are closer to their work than management, and if they are conscientious, often see opportunities for profit and means of improving efficiency that escape the notice of their superiors. By encouraging employes to make suggestions, management not only helps to create a better team spirit but it also profits dollarwise.

ROSANOL

(AN ACETAL)

Typical Specifications:

PHYSICAL APPEARANCE:	Colorless Liquid; APHA 10 Max.
ODOR TYPE:	Floral, Rose.
SOLUBILITY:	30 parts soluble in 100 parts of 70% Ethyl Alcohol.
STABILITY:	Very stable in neutral and alkaline media.
REFRACTIVE INDEX $(n\frac{20}{D})$:	1.5210
SPECIFIC GRAVITY $(\frac{20}{20})$:	1.0880
QUALITY:	Specifications carefully checked in our modern control laboratories.
SUGGESTED USES:	Because of its great stability this product is valuable in soap and cosmetic odors. Its fine aroma permits its use in the highest priced perfumes.

Note these additional VERONA specialties:

CYCLAMAL • RESEDALIA

VERONOL • AMBRE SUPERESSENCE E-1273

Sole representatives in the United States for: J. & E. SOZIO, GRASSE, FRANCE

RESINOIDES • NATURAL ABSOLUTES • ESSENTIAL OILS

Write for our complete catalogue.

VERONA

PRODUCTS BUILD SALES FOR *Your* PRODUCTS

Aromatics Division

VERONA CHEMICALS A Division of Verona-Pharma Chemical Corp.

Plant and Main Office: 26 Verona Avenue, Newark, N. J. 1210 Rosedale Avenue, Chicago, Ill.

AEROSOL
PRODUCT
DEVELOPMENT

- Consulting
- Research
- Testing

The Safest Path
to Successful Products

THE
REED RESEARCH
CORP.

formerly Aerosol Process Co., Inc.

Winston H. Reed, Ph.D.
President and Technical Director

Mill Street, Shelton, Conn.
Phone Ansonia-Derby
REgent 5-4858

CONFIDENTIAL

UNBIASED

A Company
devoted exclusively
to development
and research on Aerosols

AERO SCRIPTS

Jack Pickthall*

Nitrogen in Aerosol Packaging

Charlotte Haas has written at some length on "Nitrogen in Pressure Packaging" (Soap & Chemical Specialties, May, 1958) and suggests that the sales of pressure-packed toothpaste may reach a figure of 100 million in 1958. The advantages of this type of packing are elaborated. These include the absence of chilling sensation, low cost, small amount necessary for use, insolubility in the active ingredients, absence of foaming, inertness of the gas, low order of toxicity and low weight loss from the container. The other side of the picture is also given, namely, pressure loss as the product is dispersed, the possible requirement for special equipment including regulators, pressure testing and crimping apparatus. Formulation of a product may be critical especially where viscosity is concerned and also, residual losses may be high. Finally, and this may be the biggest disadvantage of all, the accidental gas discharge can completely destroy the value of the pack. Miss Haas says on this subject, "Suppose a can containing a viscous product is stored on an angle or on its side or is held in such a position prior to dispensing. The opening of the dip tube may not be covered by the product. With highly viscous substance a few seconds will be required after the unit is returned to upright position before the opening is once more covered by the mass. Supposing the button is actuated while the opening is exposed. The result will be discharge of compressed gas. Pressure will be irrevocably lost, because there is no reserve of nitrogen dissolved in the product which might be released and serve as a replenishing reservoir. Until very recently gas loss in storage was supposed to be another bug-bear of the nitrogen pressure packer."

Control of Sunburn

Dr. W. Schweisheimer has written a good article on the 'Control of Sunburn' (P. E. & O. R. April, 1958). A table is given showing the relative absorption capacity of a number of sunscreens based on the determination of the optical density of their 0.1 mm per cent solutions in an 0.1 mm silica cell at 3080A which is at the peak of the 'sunburn curve'.

Sunscreen Indices applying to 3080 Angstrom.

Compound	*Sunscreen Index*
Ethyl p-dimethylaminobenzoate	14.80
Ethyl p-aminobenzoate	9.60
Isobutyl p-aminobenzoate	9.20
p-Aminobenzoic acid	7.40
Digalloyl trioleate	2.30
Ethyl gallate	1.40
Lauryl gallate	0.85
Salicylic acid	4.30
Sodium salicylate	2.40
Methyl salicylate	4.00
Salicylamide	3.90
Salicyl aldehyde	2.20
Dipropyleneglycol salicylate	1.90
p-Aminosalicylic acid	1.90
Methyl umbelliferone	7.70
Umbelliferone acetic acid	6.00

The value of the ethyl ester of p-dimethylaminobenzoate is clearly shown. The article is well worth consulting if you are interested in experimenting with an anti-sunburn preparation in aerosol form.

Preventing Corrosion

The "Manufacturing Chemist" April, 1958 brings to the attention of their readers that a first class survey on corrosion and the means for preventing and controlling it, is now available. This is in the form of the Proceedings of the Corrosion Prevention entitled "Industry Fights Corrosion" and is published by Corrosion Technology. This book costs one guinea and is obtainable from Leonard Hill, publishers. It would be of obvious use to everyone interested in aerosol packing in metal containers.

Off Odours

Christian F. Wight has written an interesting article on the "Packaging of Perfumed Products" (Soap & Chemical Specialties, May, 1958). He states that the aerosol package furnishes complete protection from two, and even three of

* Chief Chemist, Polak & Schwarz, England, Ltd.

the Essential Idea in our New Macro Series

.... check first with Verley

VERLEY MACROCYCLAROMES
VERLEY MACROBASEAROMES
VERLEY MACROFIX
VERLEY MACROFLOR

Macrocyclic Musks, Tibettogene and Ambrettogene have a real purpose and an ever widening future in the art of Perfumery. The skillful use of generous yet carefully balanced quantities of Macrocyclic Musks can provide a definite improvement in your fragrance. In offering the products listed below we have created products which can be used as finished products or as building block bases.

The examination of our Macrocyclaromes, Macrobasearomes, Macrofix and Macroflor will demonstrate to you the principle of inspired use of Macrocyclic Musks mentioned above.

Write for samples, quotations, and free bulletin, "Macrocyclic Musks and their future in Perfumery."

eas for
to your product
rom a request
nable you to take
e of our experience.

for immediate release:

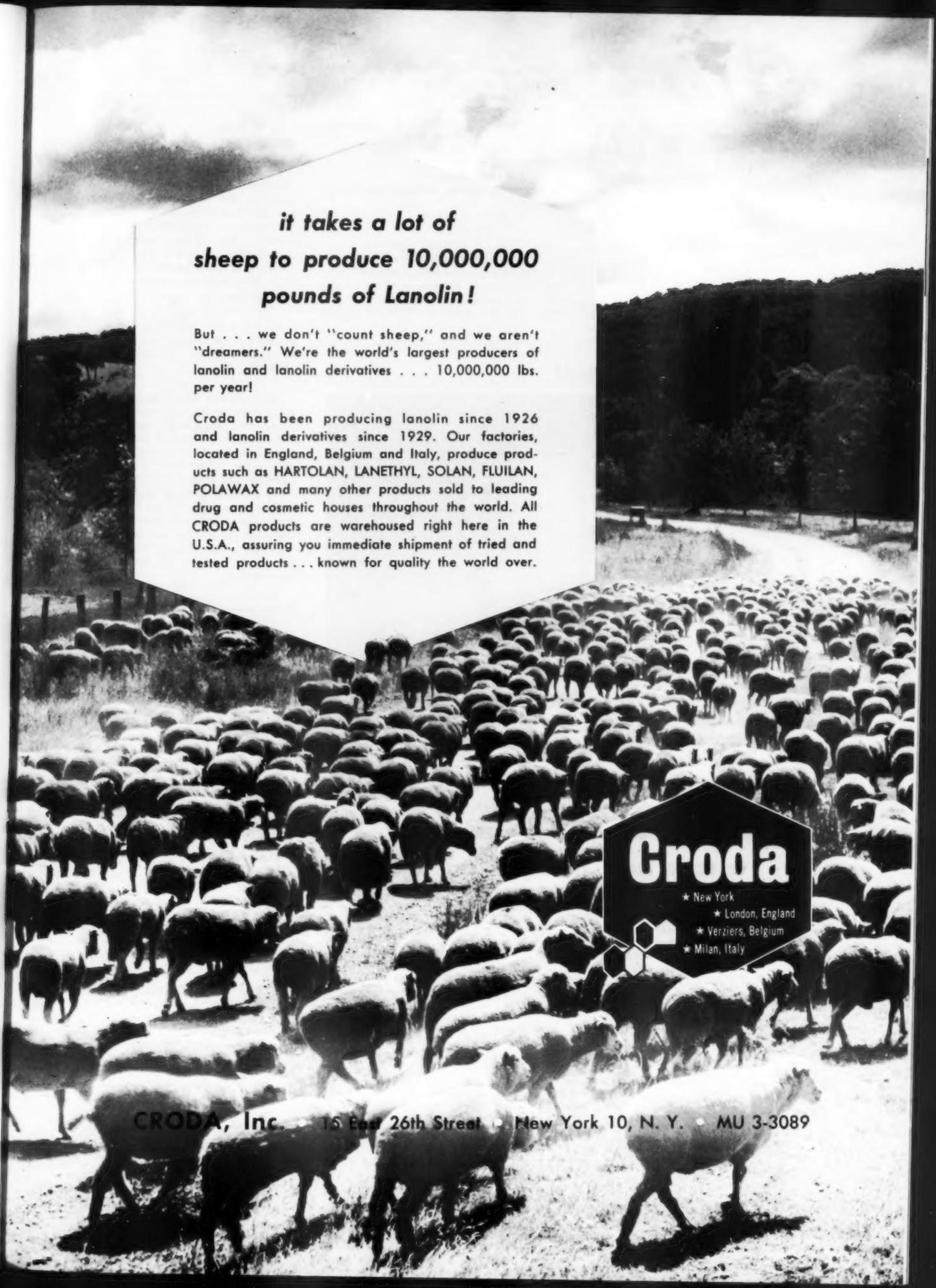
- ocyclarome XL 1014
- robasearome Boisette
- crofix Lavender
- acrofix Fougere
- Macrofix Pine Woods
- Macrofix Cologne
- Macroflor Lilas
- Macroflor Convalaria

Albert Verley & Company

1375 EAST LINDEN AVENUE, LINDEN, NEW JERSEY
1018 S. WABASH AVENUE, CHICAGO 5, ILLINOIS
21 EAST 40th STREET, NEW YORK 10, NEW YORK
MEFFORD CHEMICAL CO.
5353 JILSON STREET, LOS ANGELES 22, CALIF.

- Synthetic Aromatic Products and Organic Isolates • Bouquets and Finished Compositions
- Synthetic Flower Oils and Aromatic Bases • Essential Oils

CHANGING YOUR
PACKAGE TO AEROSOL?
CALL ON
CONTINENTAL
FILLING'S
KNOW-HOW
Propellant Used
• Freon
• Genetron
• Isotron
• Unacon
• Butane Type
• Nitrogen Type
Ingredients Filled
• Low to High Viscosity
Contract Packaging Specialists
CONTINENTAL FILLING CORPORATION
Danville, Illinois


it takes a lot of
sheep to produce 10,000,000
pounds of Lanolin!
But . . . we don't "count sheep," and we aren't "dreamers." We're the world's largest producers of lanolin and lanolin derivatives . . . 10,000,000 lbs. per year!
Croda has been producing lanolin since 1926 and lanolin derivatives since 1929. Our factories, located in England, Belgium and Italy, produce products such as HARTOLAN, LANETHYL, SOLAN, FLUILAN, POLAWAX and many other products sold to leading drug and cosmetic houses throughout the world. All CRODA products are warehoused right here in the U.S.A., assuring you immediate shipment of tried and tested products . . . known for quality the world over.
Croda
★ New York
★ London, England
★ Verziers, Belgium
★ Milan, Italy
CRODA, Inc. • 16 East 26th Street • New York 10, N. Y. • MU 3-3089

the scourges of aromatic materials, namely, light, oxygen and tendency to evaporate. On the minus side he says that tight packages allow malodours, where they exist, to build up in the free air space. In some instances it may be essential or desirable to have a partially permeable package which can breathe in order to release these unpleasant light bodies existing or developed in the base. Mr. Wight emphasises that every aspect of a package should be studied as a possible source of "off" odour. A rubber gasket in an aerosol container may contribute a disagreeable mercaptan note.

Use of Lanolin Derivatives

Of recent months there has been an increasing interest in lanolin derivatives for use in aerosol cosmetic products. In "Drug and Cosmetic Industry," February, 1958, three formulae for aerosol products are given. The first is an aerosol Hair Spray employing:—

1.5% Ethoxylan 100
2.0% P.V.P.
1.0% Urea.

The second, also an aerosol Hair Spray, contains:—

0.2% Lanitrol
2.0% P.V.P.
0.2% Myristyl alcohol.
0.2% Iso propyl palmitate.

The percentages in both formulae refer to the alcoholic solution and not to the whole contents of the container. A formula for an aerosol shave cream is also given and this makes use of:—

1.5% Ethoxylan 100.

in an aqueous base containing triethanolamine soaps and glycerin.

Notes

I have received from Messrs. Wheaton Plastics Co., a beautiful colour illustrated booklet. This booklet shows a very attractive range of plastic coated glass bottles which can be supplied to the aerosol industry. The reading matter tells what an aerosol is and how it works. There are some good photographs showing what happens to a plastic coated aerosol bottle on breakage.

* * *

So the word "bomb" in aerosol techniques has not yet died. Patent 2,822,961 as mentioned in the "Aerosol Age," April, 1958.

* * *

R. A. Fulton has written a really excellent article III, "Aerosol Age," May, 1958. This deals with the hazards involved in the handling of pressurized containers. Some of the writer's experiences are vividly emphasised. The article illustrates the potential energy generated when a liquefied gas is suddenly released and compares the hazard involved with that of a compressed gas. Methods are discussed for making safe laboratory test containers. This is an article that is well worth studying by all workers in the aerosol field.

From Heyden Newport

WHERE NON-TOXICITY COUNTS *
SPECIFY HEYDEN NEWPORT PARASEPTS

Preserve your pharmaceuticals, cosmetics, and toiletries against bacterial or fungal action with PARASEPTS. They offer the following important advantages:

- Colorless, odorless and tasteless in recommended concentrations.
- Non-irritating to skin; extremely low toxicity.
- Economical – effective in low concentrations.

The purity of these preservatives is backed by over 50 years experience in producing chemicals of the highest quality.

Methyl Parasept Purified (Methylparaben, U.S.P.)
Ethyl Parasept Purified (Ethyl parahydroxybenzoate)
Propyl Parasept Purified (Propylparaben, U.S.P.)
Butyl Parasept Purified (Butyl Parahydroxybenzoate)

Send for technical literature on Heyden Newport PARASEPTS.
Technical grades also available for industrial use.
Heyden Newport Chemical Corporation, 342 Madison Ave., New York 17, N.Y.
*Esters of Parahydroxybenzoic Acid. Trade name "Parasepts" reg. U.S. Pat. Off.

HEYDEN NEWPORT *Where tradition meets tomorrow in chemical progress*

Trade Literature

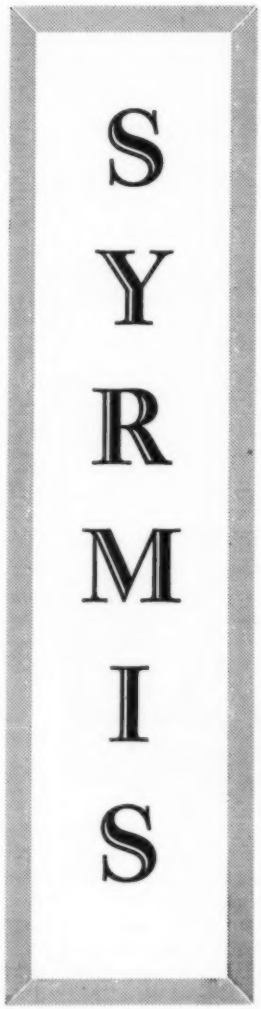
A new Aerograph catalog on Gas Chromatography is available from the Wilkins Instrument and Research Corp., of Walnut Creek, Calif.

Arapahoe Chemicals, Inc. of Boulder, Colorado has issued to all its agents, distributors and general mailing list, its 12 page Domestic Catalog and 4 page Export Price List and supporting Sales Bulletins for each. Shown in the basic catalog are 44 different products, 5 of which are newly listed this year.

Bel Art Products of West New York, N.J. has published a 22 page catalog of all types of plastic laboratory ware.

A new brochure entitled "Gentle-ized Spray Drying by Nerco-Niro" describes advantages of the patented Nerco-Niro spray drying system and outlines the engineering services offered by the company. Illustrated and described are portable, utility, pilot and industrial spray dryers as well as the extensive custom drying facilities maintained by the Nichols Engineering & Research Corp. of New York City.

SYRMIS



An exquisite fragrance for perfume, cologne, powders and sachets . . . warm, rich, lasting.

Extensive consumer tests place Syrmis in the top brackets for universal appeal on the American market.

We shall gladly send you a sample so that you may test and try Syrmis; we know that you will be gratified with the results.

$20.00 the lb. or $1.50 the trial oz.

Syrmis "C" for creams and lotions . . . that this memorable fragrance may enhance your toilet preparations also.

$14.00 the lb. or $1.25 the trial oz.

●

COMPAGNIE PARENTO

INCORPORATED

CROTON · ON · HUDSON, NEW YORK

NEW YORK DETROIT CHICAGO

COMPAGNIE PARENTO, LTD.

TORONTO MONTREAL

Replica of perfume bottle used in the year 1768

SINCE 1768 the House of Chiris has dedicated itself to the Fifth Sense. In the development of Essential Oils, Floral Absolutes, Chemical Isolates, Synthetic Chemicals, and all those creations and specialties which combine industrial aromatics with natural products and produce fragrance, the House of Chiris has a cherished history. Today Chiris maintains laboratories headed by experienced chemists who have available to them not only the accumulated knowledge of generations of Chiris perfumers and chemists, but also the research facilities of five modern laboratories located in Grasse and Paris, London, Sao Paulo (Brazil), and New York City. Whether Essential Oils, Isolates, or combinations thereof, are used as fragrance constituents by the perfumery, soap, cosmetics or allied industries, we are happy to be consulted.

ANTOINE CHIRIS CO., INC.

220 East 23 Street, New York 10, N. Y.

GRASSE • PARIS • LONDON • SAO PAULO

DESIDERATA

Maison G. deNavarre, M.S., F.A.I.C.

Aromatics Deterioration in Soap

Though not tested, soap shampoo and shaving cream would give comparable results to those found by Moldavskaya and Dmitrieva (J. A. O. C. S., *35*, 444, 1958), when checking the storage effect of toilet soap on aromatic chemicals. Sixteen synthetic aromatic principles and four essential oils at a ½ per cent level were tested. Isoeugenol and methyl anthranilate caused darkening. Ionone; coumarin; acetylanisole; muscatel, sage and coriander oils had a slight effect. See the original Russian for complete details.

Sulfur Shampoo

The fact you can get powdered sulfur in several grades presents problems in making water dispersed scalp preparations. However, this isn't the only hurdle to watch for.

A number of publications have shown that elemental sulfur is readily absorbed by the skin. It has also been thought that sulfur in contact with the skin (albeit keratin and hair is keratin) forms more active compounds.

Hair washed with sulfur shampoos, beauty operators told me at a recent conference, raise the dickens with hair coloring, permanent waves and hair sheen.

Rumblings of this have been heard off and on, but no significance has been attached to it. Maybe sulfur shampoo makers ought to take another look at their "use tests."

There seemed to be a feeling among the beauticians that scalp disorders were probably fewer as a result of using such shampoos. There is still a belief that the selenium sulfide shampoo used by some, appears to make "oily dandruff" less noticeable at first, but continued treatment seems to make hair and scalp more oily.

Poor rinsability of sulfur shampoos was another complaint. My own work confirms this with the several products tested.

Kanamycin

Hot off the fire, with only a matter of months from discovery to distribution is Hamao Umezawa's Kanamycin, a water soluble basic antibiotic belonging to the "wide spectrum" classification derived from Streptomyces kanamyceticus. A great advantage is its stability at a pH range from 2.0 to 11.0 and at higher temperatures as well.

This is a good starter for an antibiotic with cosmetic potential. The questions of bacterial resistance, human sensitivity, side effects and others will soon be known. Some of its properties seem to be similar to streptomycin.

Antiperspirant Labelling

The July Consumer Bulletin refers to a report in Chemical Week on an appellate court comment of a case of allergic reaction to an aluminum sulfate containing antiperspirant with the following remarks: "The court held that since the company was aware that certain persons are allergic to aluminum sulfate it should have foreseen the danger of injury and warned against it; further, a manufacturer has the duty to warn those few people who it knows cannot use their product without injury. It will be interesting to see just what effect this case has on the advertising and labeling of other antiperspirants based on aluminum compounds."

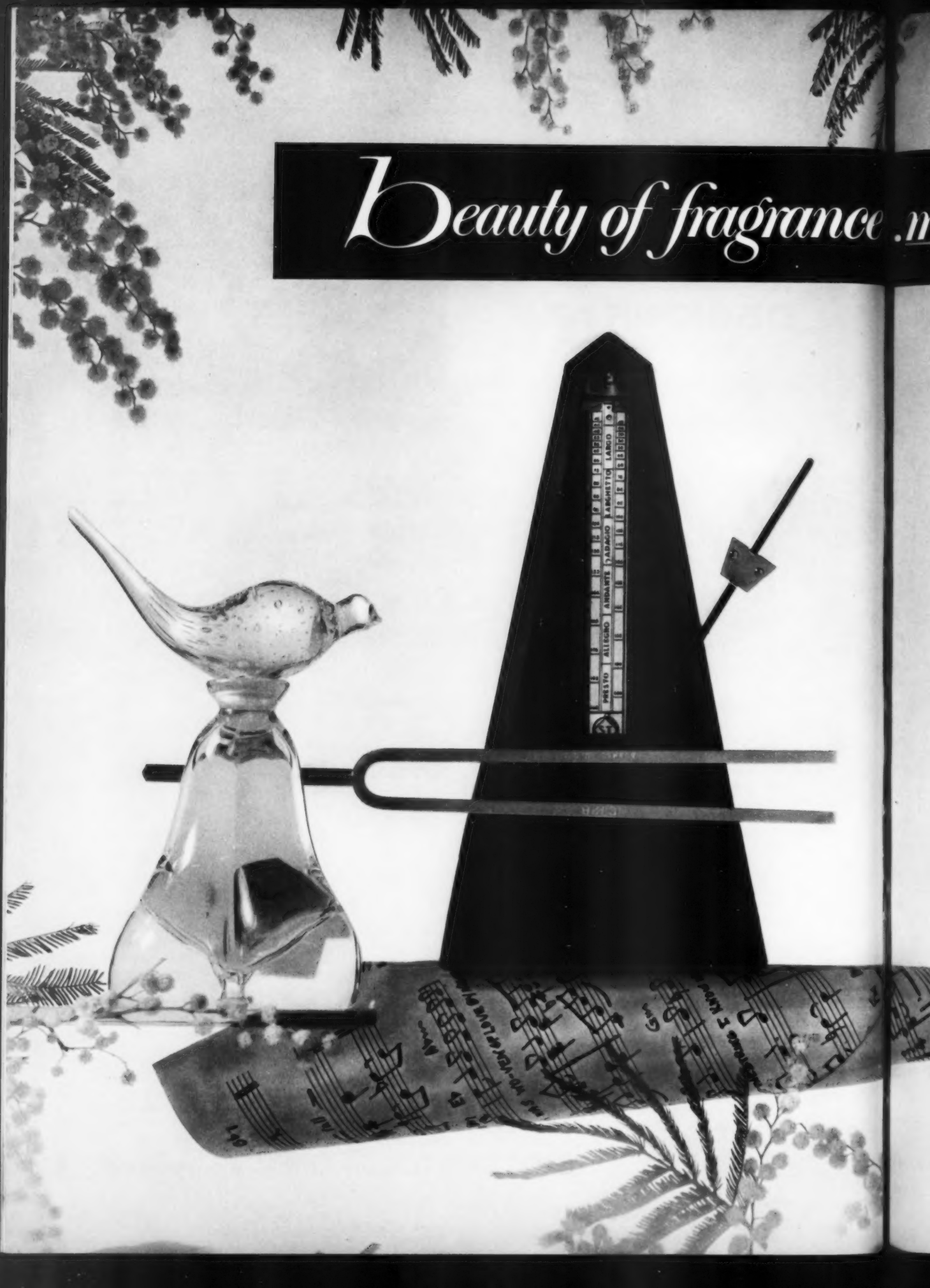
It is impossible to foresee this danger for it is not a common one. It seems pointless to print such a warning even as it is to print a warning on drowning on a bottle of pop—just because people have been known to drown in water, a major constituent of pop.

Perhaps more important is to teach consumers to read directions completely before using any product. Here is an area in which consumers fail almost completely. Warnings and cautions are just as easily by-passed as directions for use.

When it comes to safety of ingredients, the court and anyone knows that there is no "safe" material under all conditions of use. Some ingredients are, of course, more widely allergenic than others, but just where to draw the line is pretty hard to say. Wish the problem was as simple as Consumer Bulletin tries to make it out,

Notes

Well, the Society of Cosmetic Chemists European Seminars tour will be well on its way by the time this is written. . . . Two new ampholytes are available from Glovers (Chemicals) Limited under the names of Amphionic and Ambiteric compounds. . . . Looks like placenta extract claims are in for some going over by F. D. A. . . . Nail polish, cold permanent waves, hair dyes and lipstick, in this order were responsible for cosmetic dermatoses based on answers to questionnaires, based on almost 8,700 confirmed patch tests reported by Reiss. . . . Somehow it is hard to cry for the antibiotic manufacturers in their


Beauty of fragrance .m

ce .made-to-measure for your success!

The ability to originate fragrances of distinction and character—to explore their artistic possibilities—to give them reality, endow them with unique appeal—is the foundation of Givaudan's service.

This service is based on the skill and imagination of Givaudan's perfumers and the broad scope of our research and development facilities. It is yours, on which to build distinctive harmonies of living fragrance—made-to-measure for your success!

GIVAUDAN-DELAWANNA, INC.
321 West 44th Street • New York 36, N. Y.

GIVAUDAN

STOCK DESIGNS— A variety in blue or flint glass . . . in a complete range of sizes . . . is ready for immediate shipment.

MARYLAND GLASS DESIGNERS USE THE MICROMETER FOR PRECISION ACCURACY...

BUT ESSENTIALLY

Package design begins with an idea

Every craftsman knows his tools, but the creative package designer must do more—first he must bring an idea to life. An idea that says Yes to questions like: Is this container distinctive? Will it sell on the shelf? Does it pack properly, ship safely? Our design department specializes in designs that stop the eye . . . start the sale. For an affirmative solution to your design problems, contact Maryland Glass Corp., 2147-53 Wicomico St., Baltimore 30, Md.

PACK TO ATTRACT IN MARYLAND GLASS

Blue or Flint • Jars and Bottles

trouble with the F. T. C.—just as it is for the polio vaccine makers. . . . Dow Chemical are fooling with a new polymer for aerosol hair sprays. . . . Do you know there are at least 13 manufacturers of ampholytic surfactants? . . . The Science Museum in London has a library bibliographical series Bulletin No. 735 on Pearl Essence which is quite a compilation of references that goes back to 1939. . . . I am anxious to know how workers in the field of phytohormones and phytostimulins determine the great rejuvenating effect on skin they so glibly talk about . . . which recalls that there seems to be a "fruit juice" fad in cosmetics in Paris (all France, too, I guess). . . . In a recent issue of the Rivista Italiana etc., Proserpio and Cocchini describe the application of banana pulp for use in facial masks, pointing out that it has an interesting vitamin content. . . . Hirsch has written a new German book on hair and hair cosmetics. . . . Borchert has recently written on the value of placenta extracts in cosmetics and tells you how to judge their quality. . . . There is an interesting article in Kosmetik-Parfum-Drogen Rundschau (5/6) on the use of acetoglycerides in cosmetics.

Fourth Japan Flavor Show

The fourth annual flavor show in Japan will be held in the Nakanoshima Public Hall, Osaka, October 11, 12 and 13. All foreign makers of flavors are invited to participate. Flavors unknown in Japan are welcome if a rough analysis is given on display cards.

There is a moderate charge for exhibiting products but overseas participants may carry out all arrangements for making a display through the advisory committee. Details may be had from S. Sudoh of the Flavour Show Advisory Committee, care of Nippon Flavour Kogyo Co. Ltd. Komatsu, Naruo-Cho, Nishinomi A-Shi, Hyogoken, Japan. Japanese money is accepted in case the money is paid in Japan by the exhibitor's agent. Delivery of exhibits must be made by October 10. Exhibits will be returned if requested and shipment expenses will be charged to the exhibitor. Souvenirs will be presented to each exhibitor. The theme of the show is: "A Step Forward in the Promotion and Dissemination of Flavour Knowledge."

The committee points out that progress in a scientific way has been made in developing a science of taste.

ONE Name Stands Out!

The EIFFEL TOWER
Paris

Designed by Gustave Eiffel for the first International Exposition, 1888 · Occupies 2½ acres and is 984 feet high · From the top in clear weather, may be seen the towers of Chartres Cathedral, fifty miles away.

and in...
FRAGRANCE BASES
it's...

Tombarel

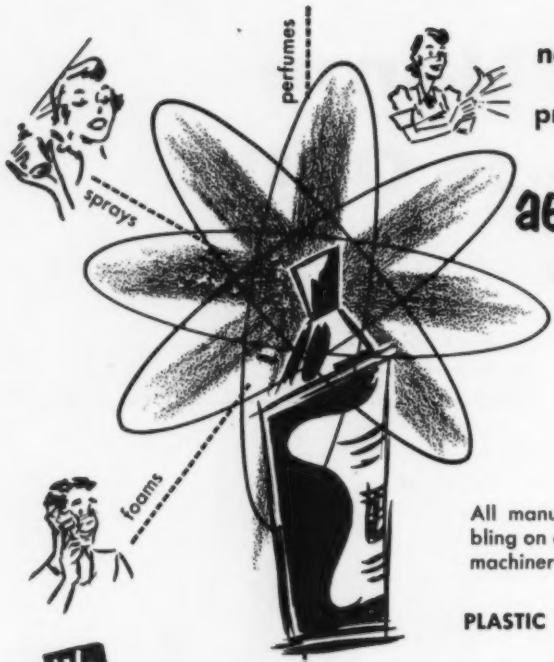
for Finished Compounds for use in PERFUMES, SOAPS, COSMETICS and AEROSOL DISPENSED PRODUCTS

American Representatives of
TOMBAREL FRERES, S.A., Grasse, France

Put your fragrance problems up to us.

Tombarel
PRODUCTS CORPORATION
725 Broadway, New York 3, N.Y.

CHICAGO
A. C. DRURY & CO., Inc.
219 East North Water Street



new IDEAS and new products...our STRENGTH

aerosol packaging

AND NITROGEN FILLING

SPRAYS . . . FOAMS . . .
METERED PURSE-SIZE AEROSOLS

- PRODUCT FORMULATION
- PACKAGE CREATION
- QUALITY CONTROL

All manufacturing, packaging, and assembling on continuous-flow production lines . . . machinery and connections of stainless steel.

PLASTIC TUBES & CONTAINERS FILLED
NITROGEN FILLING

We . . .
FORMULATE
MANUFACTURE
PACKAGE

Old Empire

PERFUMES &
COLOGNES
LIQUID & CREAM
SHAMPOO
TOOTHPASTE
HAIR PREPARATIONS
& SPRAYS
DEODORANTS
SHAVING CREAMS
SKIN PREPARATIONS
CREAM RINSE
HAND PREPARATIONS
BATH PREPARATIONS
OINTMENTS
PHARMACEUTICALS

Old Empire

HUmboldt 4-2121
N.Y.C. WOrth 4-7870
865 Mt. Prospect Avenue, Newark 4, New Jersey

Certified Cosmetic Colors

for

Lipsticks • Face Powders
Rouges • Compacts
Lip Pomades • Nail Polishes

also

Purified Iron Oxides
Purified Titanium Dioxide
for Drugs and Cosmetics

Let our modern scientific laboratories assist in your color problems.

Samples Cheerfully Submitted.

Ansbacher-Siegle

CORPORATION

Manufacturers of Fine Colors

General Offices, Factory and Laboratories
ROSEBANK, STATEN ISLAND, NEW YORK, N.Y.
Boston, Chicago, Cincinnati, Cleveland, Greenville, S.C.,
Los Angeles, Philadelphia, San Francisco

look for the symbol of the **RETORT**

YOUR GUARANTEE
OF MATCHLESS QUALITY,
PURITY, UNIFORMITY

Behind the symbol of the Retort stands three generations of family pride and "know-how" in Essential Aromatics, natural and synthetic flavors, perfumer's specialties. Made in the West's most modern plant. The Retort is your guide to dependability.

F. Ritter & Co.
Los Angeles 39, California
Branch Offices in Principal Cities

Sure, synthetic chemistry is wonderful, but

NATURAL FLORAL OILS

are the class ingredients that put a perfume, cologne or cosmetic fragrance into the orbit of success . . . sales success.

In Paris, for instance, where quality comes first, French perfumers always favor natural *floral Absolutes, Hyperabsolues,* and natural oils.*

Sure, it costs a bit more, but that extra depth that nature imparts to a fragrance is the real selling point . . . particularly toward the end of the bottle when the consumer is ready to buy more.

Sole distributors in the U. S. and Canada for CHARABOT & CIE., successors to HUGUES AINE, Grasse, France.

CHARABOT & CO. INC.

114 East 25th Street, New York 10, N. Y. ORegon 4-0510

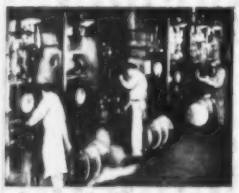
*Registered trade mark

Production

Cosmetic Research

Creative Perfumer

Perfume Evaluation Board



Aromatic Production

Sales

Chemical Engineering

Aromatic
Chemical Research

Quality Control

People...

THE IMPORTANT INGREDIENT

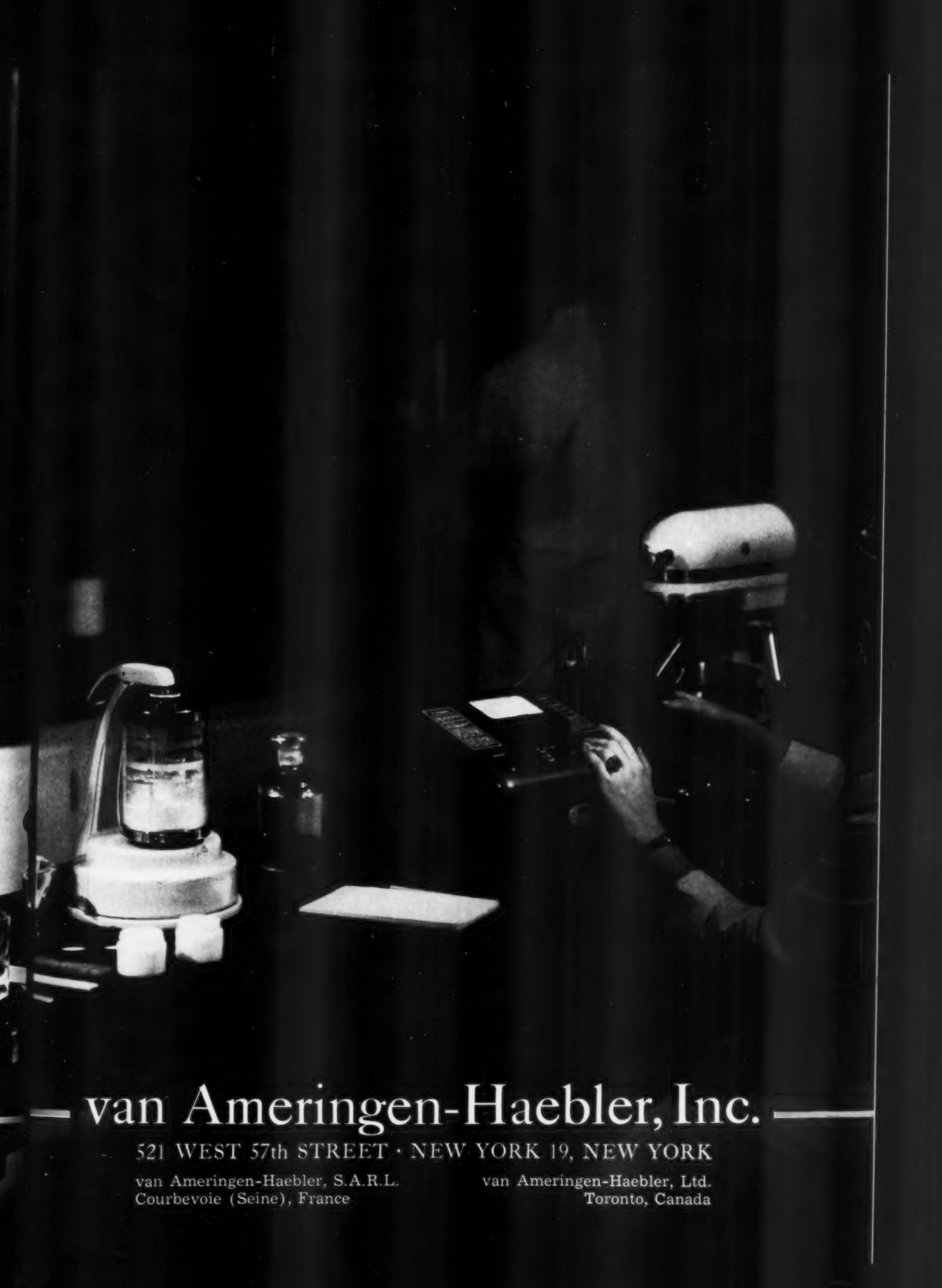
A successful perfume is the result of the abilities of the many *experienced people* who have an important part in its creation, testing, evaluation and production.

Cosmetic Research

Before a fragrance is recommended to a VAH customer, it is thoroughly tested *in product* by these expert technicians. They have at their disposal a complete modern laboratory equipped to produce any type of functional cosmetic, toiletry or aerosol product.

Here, the fragrance is checked for technical suitability to the physical and chemical characteristics of the product, the process and the package.

The specialized technical know-how of these people is an important ingredient in the perfume that VAH offers for your product.



van Ameringen-Haebler, Inc.

521 WEST 57th STREET · NEW YORK 19, NEW YORK

van Ameringen-Haebler, S.A.R.L.
Courbevoie (Seine), France

van Ameringen-Haebler, Ltd.
Toronto, Canada

KNAPP FINE CHEMICALS PRODUCTS INC.
LODI, NEW JERSEY

- **EMULSIFIERS**
- **DETERGENTS**
- **ABSORPTION BASES**
- **FRAGRANCES**

- **SCIENTIFICALLY DEVELOPED AND MANUFACTURED— SPECIFICALLY FOR APPLICATION IN COSMETIC FORMULATIONS**

KNAPP FINE CHEMICALS PRODUCTS INC.
LODI, NEW JERSEY

If it's Foil...

discuss your needs with us. Printing, embossing and die-cutting in foil is our business — *our only business.*

Whether it is a foil seal, label, wrap, or merchandise card, we will work with you from design to finished job. Phone or write for ideas and estimates. We will be happy to consult with you, without obligation, of course.

FOILCRAFT PRINTING CORPORATION
Dept. C•3611 14th Ave., Brooklyn 18, N. Y., GEdney 6-4516
Roselawn Center Bldg., Cincinnati 37, O., Melrose 1-8963

CITRUS OILS
OIL OF ORANGE VALENCIA
OIL OF GRAPEFRUIT FLORIDA
OIL OF TANGERINE FLORIDA
OIL OF LEMON CALIFORNIA
Manufacturers of the Finest Terpeneless and Concentrated Citrus Oils.

OIL OF BERGAMOT
Official stock distributor since 1936 for
CONSORZIO DEL BERGAMOTTO
REGGIO CALABRIA, ITALY
Serving the Perfume, Flavor, and Pharmaceutical Industries for over 35 Years

Citrus & Allied Essential Oils Co.
61-63 SHEFFIELD AVE. • BROOKLYN 7, N. Y.

Hydronal

PURE (+) HYDROXYCITRONELLAL

HYDRONAL is not a blended speciality base, but hydroxycitronellal pure and simple:

PURE because all physical imperfections have been removed

by the most modern scientific means.

SIMPLE because HYDRONAL strikes only one note: the intrinsic odour

of hydroxycitronellal—true, clear, and wholly delightful.

On first appraisal, the odour of HYDRONAL may seem a little subdued. This is solely due to the absence of discordant fatty or citronellal-like by-odours which have hitherto distorted the odours of commercial and even speciality grades. Once matured in a perfume compound HYDRONAL lacks nothing in strength and stability, and special packing under nitrogen ensures that it reaches the consumer in the same immaculate condition in which it leaves the plant.

To appreciate the true character of hydroxycitronellal and all its possibilities as a perfume component, a trial with HYDRONAL is essential.

ABRAC A. BOAKE, ROBERTS & CO LTD LONDON · ENGLAND

AGENTS FOR U.S.A. TOMBAREL PRODUCTS CORPORATION · 725 BROADWAY · NEW YORK 23

QUESTIONS & ANSWERS

1301: HAIR STREAKS

Q. *We would like some information regarding the chemicals used for making "streaks" in hair. T. Y. M., Egypt.*

A. There are two types of "streaks" used. One is bleached hair pinned on or into the hair with a hair pin to give the desired effect. The other type consists of wisps of hair which are bleached and colored with standard hair dyes and the dye is applied only to the small wisp that has been bleached and not to the whole head of hair.

1302: SURFACTANTS

Q. *Please send me a list of suppliers of ampholytic surfactants which we would like to use in nonirritating shampoos. We would also like to know which perfume ingredients cause the greatest eye irritation. Are there any perfume ingredients that do not cause any eye sting or irritation? S. J. A., Florida.*

A. The following companies supply ampholytic surfactants: Armour Chemical Division, 1355 West Thirty-first St., Chicago 9, Ill.; General Mills, Inc., Chemical Division, P. O. Box 191, Kankakee, Ill.; Goldschmidt Chemical Corp., 153 Waverly Place, New York 14, N. Y.; Miranol Chemical Co., 277 Coit Street, Irvington 11, N. J. We regret that there is no list available on perfume ingredients which cause the greatest eye irritation. We do not know whether there are any perfume ingredients that do not cause any eye irritation.

1303: HAIR BLEACH

Q. *We are interested in manufacturing a soap which would bleach and color the hair. J. O. G., Mexico.*

A. We know of no one making a soap that bleaches hair—or for that matter, color it. The known bleaching agents would decolorize soap wrappers, gradually lose their strength because of surface exposed and possibly react with the soap bar itself. You would have to check all these points in advance. The same would apply to hair coloring in a soap bar.

1304: HAIR GROWER

Q. *We wish to manufacture a gray hair tonic (oil) which will color gray hair black and leave it attractive and soft. We would like a detailed formula with a list of the materials and chemicals used for this purpose. We would also like information on a hair growth tonic as well as names and addresses of suppliers of such material. I. G. M., India.*

A. The following formula taken from Chilson's work will give you a start for producing a hair coloring: Sulfur, 5%; Lead Acetate, 4%; Glycerin, 5%; Water, 80.5%; Alcohol, 5.0%, and Perfume, 0.5%. You may leave out the alcohol and increase the glycerin slightly if you wish. You might try thickening the product with something like Veegum because lead acetate is a precipitating agent for practically all gums. However, if you have them available, you might try some types of methyl cellulose to see if they will stay in solution and give you the viscosity you want. However, a material like bentonite or Veegum will give you a good suspension and also increase your viscosity to the point you might desire. As for hair growth materials, there is nothing externally applied that grows hair on the male safely which is known to science. Certainly there are a number of things mentioned in the literature but none are supported by scientific fact. Indeed, some like *p*-aminobenzoic acid tend to produce some off shades on hair when applied. If you are interested in such hair growth stimulants, we suggest you consult some book on the subject, such as Sagarin's "Cosmetics: Science and Technology." You might want to look at all members of the vitamin B complex. Suppliers are Merck and Co., Rahway, N. J., Ciba Co., Inc., Greenwich and Morton Sts., New York 14, N. Y., and Hoffman-LaRoche, Inc., Nutley, N. J., among others.

AMERICAN AROMATICS

• *Perfume Compositions*

• *Essential Oils*

• *Aromatic Chemicals*

24 East 21st Street, New York 10, N.Y. • GR7-6313

Elegance for a lovely lady

Your cosmetics help to make her lovely. To appeal to her they should be presented in elegant containers.

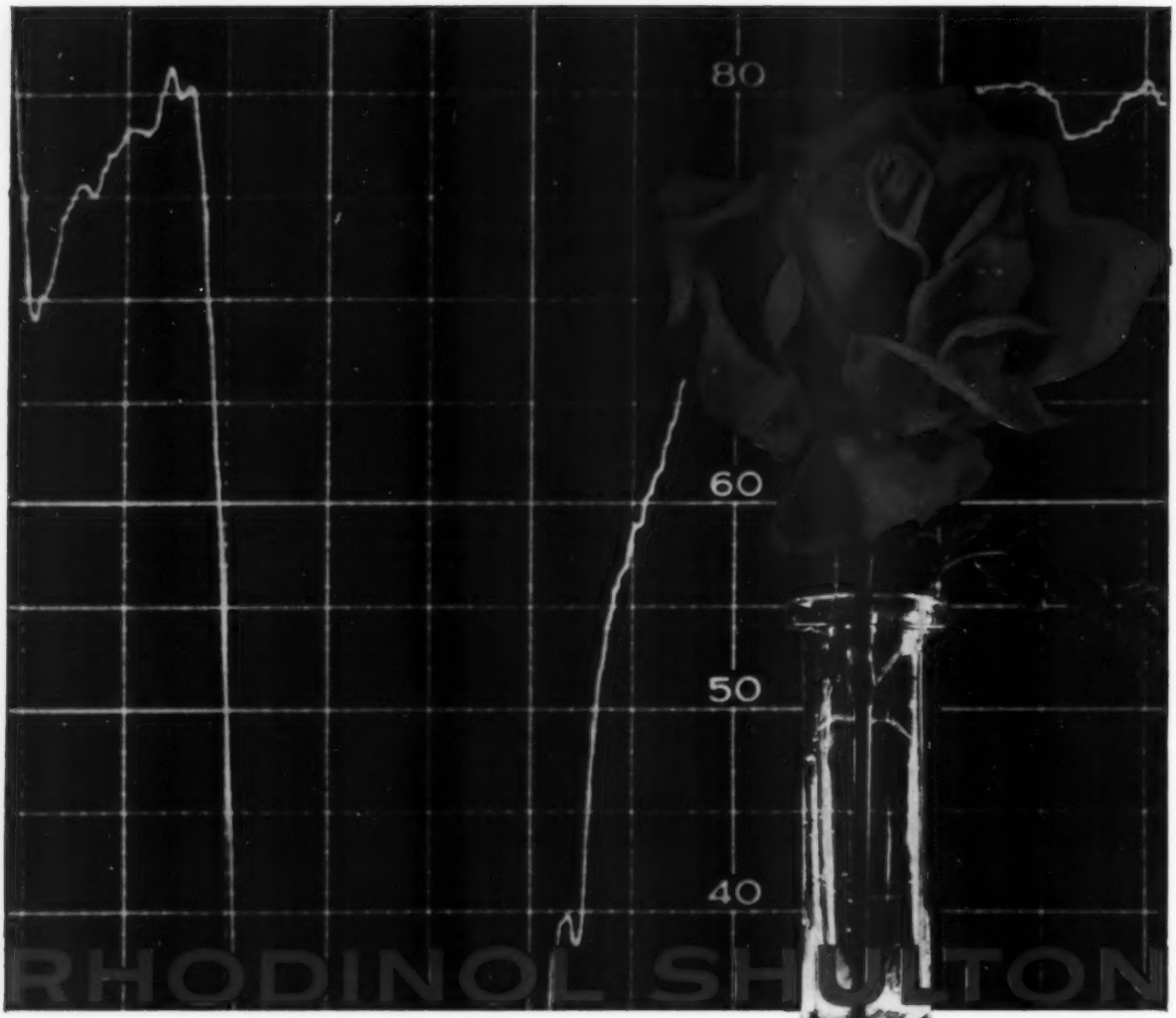
You may favor conventional or exotic shapes — in traditional gold or silver, polished to a jewelry finish . . . sunken or embossed designs . . . enamel coatings, stripes or patterns . . . engine turning or engraving.

Whatever your preference, Scovill can serve you to your complete satisfaction. By using our standard components, ornamented to your exclusive specifications, you can reduce fitting-up costs and speed delivery. Custom made cases can be created to your own designs or those of our art department.

Representatives qualified to discuss your cosmetic container problems may be reached in Scovill offices in these cities: New York—161 E. 42nd St., OXford 7-3222; Chicago—4105 W. Chicago Ave., NEvada 2-2303; Los Angeles—6464 E. Flotilla St., RAymond 3-7221.

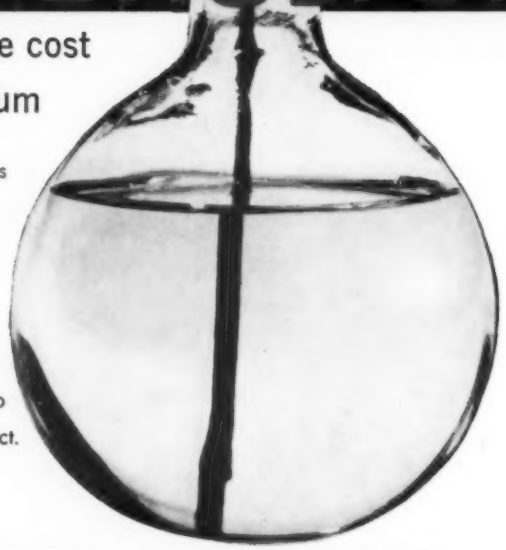
Scovill Manufacturing Company—Cosmetic Container Division—99 Mill Street, Waterbury, Connecticut

Cosmetic Containers by **SCOVILL**



superb rose effects at half the cost of rhodinol ex-geranium

Rhodinol Shulton is superior to ordinary rhodinols in its freshness effect . . . its blending power . . . its compatibility with the finest perfume materials . . . and its stability in soap. • Shulton's advanced research combined with the perfumer's artistry makes possible this rhodinol of finest quality and constant character. And you can rely on the quality of Rhodinol Shulton because it is free of impurities, free of batch-to-batch variations. • Specify Rhodinol Shulton to procure these superb rose effects at only half the cost you might expect.



SHULTON FINE CHEMICALS

DIVISION OF SHULTON, INC., 630 FIFTH AVE., NEW YORK 20, N. Y., CIRCLE 5-6263

Also available for the perfumer: BENZYL ACETATE • GERANIOL • HELIOTROPINE • ISOEUGENOL • LINALYL ACETATE RHODINOL SHULTON • NITRO MUSKS • VANILLIN, U.S.P. • VANITROPE® ... **Market tested in successful products**

The Fascinating Story of

Fabian Bachrach

VICTOR G. FOURMAN, Ph. D.*

What cordials and liqueurs are and how and where they are made. . . . How the field for their use is broadening. . . . Materials employed. . . . Various types of liqueurs and how they were developed. . . . Production in U. S. in 1957 was over seven million gallons

The chief activity of most essential oil and flavoring extract houses is two-fold: fragrance and flavor. Those engaged in the creation of fragrances are not confronted with the taste of materials except in the manufacture of lipsticks and lip pomades. Those working with flavors, however, must consider aroma as well as taste because the two senses are so closely related that barring such simple substances as sugar and salt, nothing can possess taste appeal without having odor appeal.

Importance of Bouquet

This is especially true in the preparation of liqueurs and cordials, as the bouquet is of such importance that it almost takes on the character of a perfume. Hence the nose of the expert cordial blender must be no less skilled than that of an expert perfumer. The literature on cordials and liqueurs is meager compared to that on wines and spirits. A search of the important libraries reveals few books on the subject; one with the promising title "Les liqueurs fortes" turned out to be a novel. The standard modern reference is a chapter in *Chemistry and Technology of Wines and Liquors* by Herstein and Jacobs (21). Liqueurs and cordials, according to these authors, constitute a group of alcoholic beverages of a somewhat exotic nature. "They are usually made from rectified alcohol, refined cane sugar, flavoring and aromatic substances extracted from fruits, herbs, seeds and roots." This array of materials appears to be simple in nature but the possible combinations and permutations are innumerable and account for an almost endless

*President, Syntomatic Corporation, New York, N. Y.

variety of types and grades of such products. Aside from the origin and quality of the alcohol used, factors hardly to be overestimated for obtaining the best possible results, various sugars and sugar syrups as well as a long list of other flavoring materials contribute to make each product a distinctive one. The term 'liqueur' is used chiefly on the continent of Europe whereas 'cordial' is the common term among English-speaking people. In the United States the terms are interchangeable.

Production of Cordials in U.S.

Over ninety per cent of the cordials sold in this country are now made here. Total 1957 tax payments and apparent consumption indicate approximately 2,800,000 cases. The imports were approximately 213,000 cases, which represents about 7½ per cent of the domestic market. However, the imports are by no means negligible casewise of dollarwise since most imported cordials retail at from 50 to 100 per cent higher than the domestic brands.

Methods for Producing Cordials

Three general methods are used in the preparation of cordials:

(1) distillation process.
(2) infusion process.
(3) essence process.

Cordials are frequently prepared by employing a combination of methods. Distillation as a process has been practiced from the eleventh or twelfth century; the distillation of spirits became a considerable trade in the sixteenth century. F. Sherwood Taylor, in his excellent *History of Industrial Chemistry* (47) states: "In the fourteenth century the medicinal virtues of alcoholic distillates were much extolled. . . . . this quintessence of wine would dissolve the essential oils of plants. . . . it could extract the 'virtues' from plants. . . . this resulted in an enthusiasm for preparations similar to the modern liqueurs, probably sweetened to make them more palatable."

Liqueurs made by the distillation or 'alcoholate' process, as it is sometimes called, usually have the best bouquet and the smoothest flavor but this is not necessarily true, for other methods are more suitable in certain cases, and it is the choice of materials in addition to the method selected which determines quality. After the addition of the flavor ingredients to the alcohol, a period of time is allowed for aging the product, and the resulting mixture is then distilled. During this process the volatile ingredients are carried over with the alcohol. The distillate is then sweetened and colored, and a sufficient amount of water is added to obtain the desired proof.

Infusion Process

The infusion process is one in which the fruits, fruit peels, herbs and other flavoring materials are steeped in alcohol for a given length of time. Grossman has compared this to the brewing of tea. The liquid infusion is then filtered; the insoluble materials, containing some of the alcohol which has not been filtered off, are placed in a still, and a considerable amount of additional flavor is carried over which is added to the filtered infusion. A procedure of this kind is really a combination of the infusion and distillation methods. The infusion method is often used for flavors, some of whose constituents are not sufficiently volatile, and therefore not readily carried over by distillation. Furthermore, some of the constituents from fruits and fruit juices are so delicate in composition that even the relatively low temperature at at which ethyl alcohol-water mixtures distill may effect their stability. Among the typical liqueurs made by the infusion method are:

Cherry liqueur
Guignolet (from black cherries)
Cassis (from black currants)

The process of steeping fruits and fruit peels has become in many cases old-fashioned because it consumes much time and space and does not yield the uniformity and consistency secured at present by modern standards.

Essence Process

In the third process, called the essence process, essential oils, fruit juices, natural fruit flavors and other flavoring materials are introduced into the alcohol which is then sweetened and colored after the alcoholic strength has been adjusted by dilution with water. The sweetening is accomplished by adding sucrose or dextrose or a mixture of both, with or without the use of various sugar syrups. According to law, the finished cordial must contain not less than 2.5 per cent by weight of sweetening agents. In many instances the solutions employed are in turn obtained by infusion, percolation or extraction.

Among the well established liqueurs are Benedictine and Chartreuse; the formulas for these are closely guarded secrets. The ingredients of many famous liqueurs are indicated in a number of books but at best they are merely approximations and guesses. Chartreuse was first made by the Carthusian monks near Grenoble, France. Its basis is cognac brandy with an infusion of a special mixture of herbs. Like Chartreuse, Benedictine is also an infusion of herbs in a cognac base. First produced by an order of French monks, it has been for sometime in the hands of a commercial enterprise operating the original distillery at Fécamp, France.

Materials for Making Cordials

The three groups of materials utilized for the making of cordials, irrespective of what process is adopted for their conversion into the final product, are:

(1) strong alcohol which is usually as neutral as possible, or brandy and other types of spirits.
(2) sugar and sugar syrups.
(3) flavoring materials, including concentrated true fruit flavors, fruit and other natural flavors, fruit peels, fruit juices, herbs, other botanicals, essential oils, including concentrated citrus oils, terpeneless oils, etc.

Liqueurs are classified according to their commercial qualities as:

ordinaires
demi-fines
fines
sur-fines.

Those which contain a single or principal flavor ingredient are usually named after the ingredient. Examples of such products are anisette, crême de menthe, crême de vanille, banana cordial, coffee cordial, cherry cordial. Many well-known cordials are compounded from numerous aromatic principles such as:

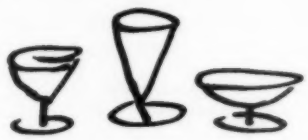
angelica	cinnamon	hyssop	orange
anise	cloves	iris	peppermint
calamus	coriander	lemon	sage
caraway	fennel	lime	thyme

The use of concentrated true-fruit flavors as well as fruit-and-other-natural flavors is of great importance in the preparation of modern cordials, not only for the true fruit products but as blending agents together with

other materials to obtain interesting fruity notes. The most popular fruit cordials in this country are:

apricot
blackberry
cherry
peach

Raspberry, banana and a number of other fruit blends are favorites in certain sections. Currant, loganberry and strawberry are most useful ingredients for bouquet compositions. In cordials the alcohol content is from about 27 per cent by volume in beverages such as the anisette types to 80 per cent by volume in absinthe, now prohibited by law in practically all countries because of the toxic wormwood oil which it contains.



Fruit Liqueurs

The preparation of fruit liqueurs has been discussed by Olbrich (38). Properties of starch syrups and their use for addition to liqueurs for increasing body without the undesirable increase in sweetness are described by Luckow (32). Sorbitol is added to give improved smoothness and palatability to various alcoholic beverages. This is covered in a U.S. Patent issued to Kenneth R. Brown (7), and assigned to Atlas Powder Co. Despite the combined efforts of the blender's art and the science of chemistry, attempts to improve the taste of cordials by using various materials and methods, some of them little short of fantastic, are not too encouraging since fine quality is still based primarily on fine ingredients. A German patent (46) describes an apparatus for the preparation of liqueurs by mixing alcohol and water vapors, condensing these vapors, then adding aroma, coloring and sweetening agents in a finely divided condition, aging the product by treatment with a high frequency current as well as ultra-violet and infra-red irradiations. Methods for making vodka, liqueurs and brandy with the aid of active charcoal and steam distillation are more realistic and are discussed by Awaloff (1).

The turbidity of alcoholic drinks has been investigated by Frachmin (12) and by Bronn (6). Frachmin considers the various materials which lead to haze in beverages: dextrins, pectins, mucins, salts, resins, essential oils, fusel oil, tannins, dyes and certain acids. He also describes processes for the elimination of haze by means of filtration, self-clarification, addition of brightening agents and centrifugation. Hints for the correct selection of filter media and filtration methods in commercial practice are given by Ohl (37) The treatment of water so that it may be most suitable for use in the manufacture of liqueurs has been given only scant attention in the literature. Gratsianov (14) considers the alkalinity, hardness and solids in samples of water, and describes soda-lime as well as ion-exchange methods for improving its quality.

Liqueurs, like other alcoholic beverages, are widely consumed in all but Moslem countries so that references about them are not difficult to find in the chemical journals from various parts of the world. Thus an article in the Journal of Shanghai Science Institute (22) describes a large number of Chinese wines, liquors and liqueurs, giving their characteristics and composition. Flavors, as well as various effects of essential oils and other flavoring materials on the properties of liqueurs are reviewed by Jannaway (26). Methods used for the preparation of liqueurs are given in detail with special reference to intermediate products obtained from herbs by extraction or distillation.

Khrimlyan and Minasyan (27) have investigated oils extracted from different varieties of mint, erigoron, geranium, artemisia, summer savory and lavender, collected at the time of flowering. Thirteen final products were obtained, among them linalool (coriandrol), menthol, erigoron, thyme and savory. These ingredients were fed to mice in increasing doses with no ill effect. Some of these oils were then used in liqueurs; they were highly praised and are to be used in alcoholic drinks.

The preparation of certain liqueurs is a matter of complex blending because they are really a mixture of liqueurs, sometimes as many as three or four being used. In serving 'Pousse-Café', a number of liqueurs are used but in this case one liqueur is floated on top of another until several layers are obtained. This is merely a matter of specific gravity, pouring the heaviest one into the glass first, and then floating the other layers on top of it. The specific gravities run from about 0.940 (usually a light cherry liqueur) to about 1.170 or higher for a rich syrupy cordial like crême de cassis.

Creme de Noyau

There is such a long list of various liqueurs that it would be impossible to describe all of them even in a comprehensive catalog, but a few observations may be noted here. One type of liqueur which is coming into more widespread use is "noyau" or "crême de noyau". This has a distinctive flavor imparted to it by the kernels of peaches, plums, apricots, cherries and other fruits. The original "noyau" was made in the island of Martinique but it is now made in France and in other countries. Just as no man is a hero to his own valet, a liqueur is not necessarily most popular in the country of its origin. One having a grapefruit base, which is prepared in the United States, seems to be a greater favorite in Europe than it is here. While most liqueurs have been developed in foreign lands, peach cordial is a typically American liqueur.

There is a collection of old books on alcoholic distillation in the library of The Chemists' Club, New York, whose librarian, Dr. Anne D. Duca, deserves the thanks of this writer for calling his attention to them. They contain no formulas to impress the maker of modern cordials but the books are of great historic interest. The earliest of these is *Vinetum Britannicum* (49), a treatise on cider and other wines, published in 1673. It mentions nothing about cordials but another book called *A Compleat Body of Distilling* (45), published in 1725, gives a number of recipes, among them one for the preparation of Juniper-water:

> "Take best juniper berries, twelve ounces, proof spirits three gallons, water, q.s., distill and dulcify with sugar one pound, for sale or use."

Hall's Distiller (17) by Harrison Hall is, as far as we know, the earliest American book on the subject (1813). The directions given in it for the equivalent of modern Triple Sec are:

> "Take of the yellow part of fresh orange peel, five pounds, clean proof spirit, ten and a half gallons, water two gallons, and draw off ten over a slow fire."

A book appearing sixteen years later was probably the first on the subject printed in New York: *A Useful Guide for Grocers, Distillers, etc.*, by William Beastall (2). The last work to be listed here is *Handbook of Wines and Liqueurs* by Thomas McMullen (33). It gives an account of the origin of liqueurs. Their invention is attributed to the Italians who spoke of these delightful

beverages as 'liquori'; their introduction into France took place in 1533 on the occasion of the marriage of Henry II with Catherine Medicis.

Sparkling Brilliance and Color

Sparkling brilliance or polish and a pleasing color are of the utmost importance for cordials and liqueurs because these attributes plus an attractive package help sales appeal. Clarification or fining of liqueurs, according to Herstein and Jacobs, is practised not only to give them limpidity and brilliance so that they are agreeable to the eye but also render them immune to changes caused by substances which they may hold in suspension. The very same words can be applied to perfumes! These insoluble substances may be precipitated by various clarification methods; the simplest of these consists in adding suitable filter aids. The insoluble substances after settling are removed by filtration.

Broader Use of Cordials

Cordials are used not only as such but in the blending of various cocktails as well as in the art of cooking. One of the secrets of 'haute cuisine' is a matter of selecting the proper amount of the right liqueur for the right dish. Crême de menthe is used for blending in drinks, also for desserts such as ice-cream, sherbets, fruits and fruit cocktails; so, too, are apricot, blackberry, cherry and peach cordials. As a topping for desserts, in cakes and in cooking, they contribute that elegant flavor which is otherwise impossible to achieve. Crême de cocao is a fine sauce on desserts; fruits are garnished with anisette or curaçao, omelettes with kümmel and with many other cordials, cakes with triple sec. "For generations top chefs have won acclaim by using cordials in their famous recipes." Minted pineapple, chicken flambé with peach or apricot cordial, duckling with curaçao, baked carrots with triple sec, are the combinations of gourmets.

Two popular orange liqueurs are curaçao and triple sec. Curaçao is named after a Dutch West Indies island off the coast of Venezuela, where the peels of the native oranges used for this liqueur are grown. The liqueur, originally made on the island, is now produced in Holland, France, this country and elsewhere. Triple sec has a more pronounced orange taste and character than curaçao, and is usually less sweet and higher in proof.

Seven Million Gallons Made in 1957

In 1957 over 7,000,000 wine gallons of cordials and liqueurs were produced in this country. Almost half of the total was made in three states: Massachusetts, Illinois and Pennsylvania. Six states contribute nearly 80 per cent of the total domestic production: the three named above together with Michigan, New Jersey and Connecticut. In 1941 production was almost four million wine gallons; in 1946 it reached a peak of nearly fourteen million. The volume in 1957 was about seven million. The total dollar value of cordials, prepared cocktails and similar compounds made in 1947 was about $14,000,000; in 1954 it was almost $20,000,000.

The traditional shapes and designs of cordial bottles make a study in itself. Originally France contributed much in this respect, as nearly every monastery produced its own type of bottle. Nothing, with the possible exception of flowers, is more decorative and fitting on a dinner table set for gracious living and festive occasions than a well-designed cordial bottle, sparkling glasses filled with nectar of crystal clear brilliance, matchless color, superb taste and fragrant aroma.

Acknowledgement is gratefully made to the following persons for help and favors of many kinds:

Harry Finer, Mr. Boston Distiller, Inc.; J. Glasser, National Distillers Products Co.; Harold Grossman, Liquor Publications, Inc.; Joseph C. Haefelin, The American Distilling Co.; Frank Haring, Liquor Store Magazine; James C. Laflin, Southern Comfort Corp.; Richard F. Larkins, Arrow Liqueurs Corp.; Theodore Lerner, Schenley Industries, Inc.; Jacques Leroux, Leroux & Co.; Martin Lewin, Clear Springs Distilling Co.; Alexis Lichine, Alexis Lichine & Co., France; William J. Papp, The Server; Samuel M. Pollak, Schenley Industries, Inc.; E. M. Rosenthol, Mohawk Liqueur Corp.; George Sailer, National Distillers Products Co.; William E. Straiger, Distillers Spirits Institute; Gregory Thomas, The Fragrance Foundation; Julius Wile, Julius Wile Sons & Co., Inc.; Allen Wolz, Canada Dry Corp.; Joseph F. Wright, Hiram Walker, Inc.

BIBLIOGRAPHY

1. Awaloff, J., Deut. Destillateur Zeitung, 55, 179, 1935.
2. Beastall, W., A Useful Guide for Grocers, Distillers, etc., Published by the author at No. 49 Delancy Street, New York, 1829.
3. Bretzfield, H., Liquor Marketing and Liquor Advertising, New York, Abelard-Schuman, 1955.
4. Brevens, J., La fabrication des liqueurs, Paris, Librairie J. B. Bailliere et fils, 1897. 2 ed. contains bibliography, Paris, 1948.
5. Brevens, J., The Manufacture of Liqueurs and Preserves, Translated from the French, New York, Munn & Co., 1893.
6. Bronn, W., Brantweinwirtschaft, 79, 347, 1957.
7. Brown, K. R., U. S. Patent 2,061,560, Nov 24, 1936.
8. *Fischer, M., Liqueurs, a dictionary and survey, Westminster, London, M. Meyer, 1951.
9. *Flanders, C., Gourmet au vatel, an autharitative guide to the proper selection of wines and liqueurs, Boston, M. F. Foley Co., 1934.
10. Fougner, G., Along The Wine Trail (contains chapter on cordials). Boston, The Stratford Co., 1935.
11. Fourman, V. G., Relation of Oder and Flaver, The American Perfumer and Aromatics, Jan. 1956.
12. Frachmin, K., Branntweinwirtschaft, 79, 145, 1957.
13. Gaber, A., Die Liqueur-Fabrikation, Leipzig, Hartleben's Verlag, 1889.
14. Gratsianov, A., Spritovaya Prom., 22, No. 1, 19, 1956.
15. Grossman, H., Guide to Wines, Spirits, and Beers. (contains chapter on cordials). New York, Charles Scribner's Sons, 1955.
16. Grossman, H., Cordials and Liqueurs, Package Store Management, Liquor Publications, Inc., New York, Nov. 1957.
17. Hall, H., Hall's Distiller, printed by John Bioren, No. 88 Chestnut Street, Philadelphia, 1813.
18. Haring, F., Knowing and Selling Alcoholic Beverages, Liquor Store and Dispenser, New York, 1950.
19. *Hartman, D., Wines and Liqueurs, Washington, D. C., Congressional Press, 1933.
20. Heath, A., Home-Made Wines and Liqueurs, London, Herbert Jenkins, Ltd., 1953.
21. Herstein, K., and Jacobs, M., Chemistry and Technology of Wines and Liquors, 2 ed., New York, D. Van Nostrand, Inc., 1948.
22. Hie-schen, T., Journal Shanghai Science Institute, Sec IV, 2, 1-60, 1936.
23. Hiram Walker, Compleat Cordial Cookery and Cocktail Guide, Hiram Walker & Sons, Inc., 4 ed., 1957.
24. Hiss, A., The Standard Manual of Soda and Other Beverages, Engelhard, Chicago, 1906.
25. Jacobs, M., Flavors in Cordials and Liqueurs, The American Perfumer, March 1951.
26. Jannaway, S., Flavours, 4, No. 2, 5, 1951.
27. Khrimlyan, A., and Minasyan, S., Some data on athereal oils, Izvest. Akad. Nauk Armyan S S R, 8, No. 11, 131, 1955. (Chem Abstracts, 50, 7737, 1956)
28. Kraft, M., The American Distiller, Philadelphia, printed for Thomas Dobson, at the Stone House, no. 41 South 2nd St., 1804.
29. Kullman, O., Die Spirituosen-Institute, Leipzig, Janecke, 1912.
30. Laboureur, S., Petits et grands Verres, Paris, Editions Bernard Grasset, 1955.
31. Leroux & Co., Manual on Cordials, Philadelphia, 1949.
32. Luckow, C., Z. Spiritusind, 60, 157, 1937.
33. McMullen, T., Handbook of Wines and Liqueurs, New York, D. Appleton & Co., 1852.
33. a* ———— National Federation of Names Institute, Home-made wines, syrups, and cordials, London, 1954.
34. Merchandise Manual, Liquor Publications, Inc., New York, 1957.
35. ———— A Visit to a Cordial Distillery, The Monopoly State Review, Nov. 1951, Liquor Publications, Inc., New York.
36. Moewes, A., Die Destillirkunst der geistigen Getranke, Berlin, Parey, 1892.
37. Ohl, F., Destillateur u Likorfabr., 54, 375, 1941.
38. Olbrich, H., Destillateur Lehrung, 6, 91, 1956.
39. Ombiaux, D., Le Nobilaire des eaux-de-vie et liqueurs de France, Liege, 1927.
40. Otto, F., Die Bierbrauerei, die Branntweinbrennerie und die Liquerfabrikation, Vieweg, Braunschweig, 1865.
41. Pollack, S., Brochure: DuBouchett ABC of Cordials, Schenley Industries, Inc.
42. Reiterman, R., Die Frucht-Likore, Berlin, Knoppe, 1952.
43. *Rolli, O. C., Wines and Cordials for Home Use, Canton, Ohio, 1934.
44. Simon, A. L., Wines and Cordials, London, Gramol Publications, Ltd., 1946.
45. Smith, G., A Compleat Body of Distilling, Printed for B. Lintot, London, 1725.
46. Stein, J. G., German Patent, 635,964, Oct. 5, 1936.
47. Taylor, F. S., A History of Industrial Chemistry, New York, Abelard-Schuman, Ltd., 1957.
48. Wilson, J. B., Reports on Cordials and Liqueuers, J. Assoc. Off. Agr. Chem., 21, 177, 1938. 22, 226, 1939. 23, 198, 1940. 33, 333, 1950.
49. Worlidge, J., Vinetum Britannicum, Printed at The Golden Ball in Fleet Street, London, 1678.
50. Westenfeld, H., Trinkbranntweine u Likorfabrikat, Inst. Garungewerbe, Berlin, 26, 8, 1936.

*These works are available at The Library of Congress, Washington, D. C.

When Citronellal Causes Trouble in Soap

This perfumery ingredient possessing a strong and intense smell, with a characteristic lemon-citronella-rose bouquet, is widely used in low priced soaps and highly prized by practical soapers.

Generally speaking, the stability of citronellal is reasonable and does not cause discoloration, but there are conditions when this additive can cause trouble by undergoing a chemical structural change resulting in an appreciable deterioration of perfumery characteristics. The agencies responsible for the degradation of odour and general loss of soap quality may be summarised as follows:

1. Prolong exposure to light and air. It is therefore advisable to store this colourless liquid in full, tightly stoppered dark glass containers placed in a cool, dark store room.

2. Contact with mineral or organic acids which, although never normally present in soap mixes, may be formed, even in minute quantities, by additives present in the soap, e.g., acetates and formates of terpineol. The presence of free fatty acids in super-fatted soaps has been known to accelerate undersirable isomerization changes resulting in the formation of poor perfumery bodies.

In the past, some soapers, have taken wise precautions when using citronellal by including in the perfumery formulation a small quantity of a chemical, such as methyl anthranilate, which is able to create a weakly alkaline condition to counteract the free acids present. The danger here, is that the additive used to safeguard the perfume may have other undesirable side reactions causing deterioration of the perfume and this must be carefully watched.

The interesting point in connection with citronellal, is that it differs so radically from citral, which is not adversely affected by weak acids but very sensitive to alkalis and quickly changed by them into methyl heptenone, which, like the isopulegol found in degraded citronellal, possesses definitely inferior perfumery properties. —*Paul I. Smith*

Olive Kernel Oil

This product, often known as "sulphur oil" or "sansa", is the inedible olive oil obtained by milling and solvent recovery after the best oil is secured for edible purposes. The quality of the inedible oil, largely used for soap stock, wool combing and other industrial purposes, varies according to the geographical locations where the trees are grown, the soil and the conditions of growing, i.e., whether crop was affected by disease, frost, drought, etc.

In 1955-56 the olive crop in many growing areas was adversely affected in quality and quantity by very severe attacks of the dacus fly which gave the oil an unusually high degree of acidity. It is noticeable that the inedible grades suitable for use as soap stock do show very clearly a noticeable drop in quality due to these influences, e.g., the colour is darker than usual, the viscosity higher and the smell more objectionable.

When considering the use of olive kernel oils as a soap-making raw material, it is important to realise that quality can vary appreciably from year to year, irrespective of any deterioration which may occur due to unsuitable storage or transport conditions. It usually pays to carry out a little research to determine something about the particular harvests, which are apt to differ appreciably country by country. In some countries quality is affected not only by growing conditions but by unsettled political and economic conditions, e.g., in French North Africa output of both edible and inedible oils has dropped and so also has quality.—*Paul I. Smith.*

Soap and Detergent Sales for Six Months

Sales of soaps and detergents bounced back during the second quarter of the year to bring the half year totals to within 1.3% of the record sales established during the first half 1957.

Reports from manufacturers participating in the quarterly Sales Census conducted by the Association of American Soap & Glycerine Producers, representing a very substantial portion of the industry's volume, record total soap and detergent sales of 1,965,477,000 pounds, compared to 1,991,695,000 pounds reported sold for the first six months in 1957. Dollar sales for six months this year amounted to $495,611,000, up 3.9% over first half 1957.

Sales of synthetic detergents, solids and liquids, representing 72% of the total market, amounted to 1,427,280,000 pounds valued at $349,024,000, up 1.7% over 1957 in tonnage and 7.8% in dollar value. Sales of liquid synthetic detergents amounted to 202,344,000 pounds, demonstrating a continuing growth trend in popularity with a 25.2% increase over the first six months of 1957.

Soap sales, solids and liquids, for the first six months period this year amounted to 538,197,000 pounds, off 8.5% from the first half 1957. Dollar sales totalled $146,587,000, down 4.4% from the same period last year.

"Have you husband and wife fragrances?"

Chemical Abstracts

THE PRESERVATION OF AQUEOUS PREPARATIONS CONTAINING NONIONIC SURFACTANTS I. GROWTH OF MICROORGANISMS IN SOLUTIONS AND DISPERSIONS OF NONIONIC SURFACTANTS. Martin Barr and Linwood F. Tice (Philadelphia Coll. of Pharm. and Sci., Philadelphia, Pa.). J. Am. Pharm. Assoc. *46*, 442-5(1957).—Various microorganisms, among them common contaminants in pharmaceutical prepns. such as *Pseudomonas aeruginosa*, *Aspergillus niger*, *Penicillium notatum* and *Monilia albicans*, will grow in solns. and dispersions of nonionic surfactants of the fatty acid ester type, producing fatty acids from the surfactants. II. Ibid. 445-51.—Of more than 50 compds. and combinations tested the following were effective preservatives (% wt./vol. given): Sorbic acid (I) 0.1-0.2, phenylmercuric borate 0.007, phenylmercuric nitrate 0.01, phenylmercuric acetate 0.007, Vandide 89 RE 0.04, methyl Carbitol 3, hexylene glycol 3, (II) and benzalkonium chloride 0.1. Combinations of 0.2% wt./wt. I and 1,2 or 3% wt./wt. II were also effective. The most satisfactory preservative for the sorbitan partial fatty acid ester and polyoxyethylene ester types was 0.2% wt./wt. I. Thru C.A. *51*, 14204h

ANTIBACTERIAL ACTION OF AROMATIC CHEMICALS. Keimei Mashimo, Shinroku Serisawa and Yoshio Kuroda (Tokyo Univ.). Sogo Igaku *10*, 805-9 (1953).—The antibacterial activity of 100 aromatic chemicals (volatile oils and synthetic org. compds.) were tested using Micrococcus pyogenes var. aureus (I), Salmonella enteritidis (II), Pseudomonas aeruginosa (III), and Mycobacterium tuberculosis (IV). Chlorcarvacrol showed strong activity on I (complete inhibition at 1γ/ml., and strong at 0.1γ/ml.). a-Amylcinnamic aldehyde (V), octyl alc. (VI), geraniol, C_{10} aldehyde, citral, cinnamic aldehyde (VII), p-isopropyl(methylhydrocinnamic) aldehyde, geranyl acetate (VIII), and citronella oil inhibited the growth of I, but none of them showed inhibition on II or III. Remarkable activities on IV were found with V, VI, VII and Jasmoglass oil. Volatile substances, such as cineole, C_8-aldehyde, VII, VIII, camphor oil white and Lavender oil showed inhibiting action on IV. Thru C.A. 14008b (*51*)

THE RHEOLOGY OF OIL-IN-WATER EMULSIONS. PART II.—THE MICROSCOPICAL APPEARANCE OF EMULSIONS IN LAMINAR FLOW. Arnold Axon (Wellcome Chemical Works, Dartford, Kent, England). —The increase in consistency observed in certain autoclaved oil-in-water emulsions containing bentonite led the author to a microscopic examination of thin films of the emulsions in flow. In this paper he describes the successful design of a microscope cell which has proved useful to distinguish different types of flow behaviour shown by a series of semi-solid oil-in-water emulsions and attempts to correlate the appearance of the globules in flow with the macroscopical appearance of the emulsions. The cell consists of four parts: a pressure plate, a standard microscope cover glass, a gold-leafed Perspex case containing two channels through which the emulsions were made to flow, and a metal case for clamping it. Using this apparatus, it was found that unautoclaved and autoclaved emulsions made from cetyl alcohol, sodium lauryl sulphate, liquid paraffin, with and without bentonite, showed differences in the dispersion of the globules. Those in the unautoclaved emulsions were mainly associated, "flocculated," into loose clusters in which each globule was free to move independently of its neighbors. Composite masses of disperse phase, called agglomerates, were formed in emulsions prepared from a preformed "emulsifying wax" which were absent from emulsions formed by adding sodium lauryl sulphate to the aqueous phase. A compact type of floccule occurred in the autoclaved emulsions containing bentonite. The globules were surrounded by a hydrated layer of bentonite which restricted their movement and provided a mechanical barrier against deformation. Rigidity was supplied by association of the hydrated bentonite particles in a network to form a gel. The globules in the autoclaved emulsions without bentonite were readily deformed and showed complete freedom of movement with no association into clusters. The Pharmaceutical Journal, Sept. 28, 1957, 259

ETHYLENE OXIDE POLYCONDENSATION OR POLYADDITION PRODUCTS. C. Shoeller (Badische Anilin & Soda-Fabrik A.-G., Ludwigshafen a.Rh., Ger.). Cong. mondial detergence et prods. tensio-actifs, 1 Congr. Paris *2*, 826-7(1954) (Pub. 1956).—A study was made of the toxicity of polyethylene oxides with a low mol. wt. as well as of that of fatty acid and fatty alc. polyglycolic ethers. The esters were found less toxic than the fatty-alc. derivs. and they do not irritate the skin. Data on some particularly useful applications of the polyglycolic ethers are also given. Thru C.A. *51*, 14108h

SEBUM. VIII. OBSERVATIONS ON THE SQUALENE AND CHOLESTEROL CONTENT AND THE POSSIBLE FUNCTIONS OF SQUALENE IN HUMAN SEBUM. Barbara Boughton, R. M. B. MacKenna, V. R. Wheatley and A. Wormall (Med. Coll. St. Bartholomew's Hosp., London). Biochem. J. *66*, 32-8 (1957); cf. C.A. *51*, 5231e.—The squalene content of sebum is lower and the cholesterol content higher in children than in adults. A relation between the sebaceous activity of a particular area of skin and the squalene and cholesterol content of the sebum derived therefrom has been demonstrated. Diln. of the surface-film lipides by lipides from the horny-layer cells is believed to significantly alter the compn. of the sebum in most areas of skin with low sebaceous activity, e.g. most skin areas of the child and the arms and legs of the adult. This apparent diln. could account for the observed differences between the squalene content of the sebum from children and that of adults. To avoid this, samples should be collected from the back. The squalene content of the sebum, both from day to day and between different individuals, varies widely. This is not the result of epidermal contamination nor variable rates of oxidation of squalene. Inactivation of SH groups and certain enzymes by squalene does not occur; no significant fungicidal or bactericidal properties have been demonstrated. Squalene can cause reversible depilitation in the rabbit but not in the guinea pig, mouse or rat, a property common to a no. of satd. and unsatd. lipides. Thru C.A. *51*, 14052f

continued on page 64

Evaluation of Shampoos

Report of subcommittee on shampoos of the S. C. C. on laboratory methods for product testing*

DR. H. HENKEN, chairman; S. R. GOFF, DR. M. A. GOLDBERG, E. JARMUS, R. P. REAVEY, DR. V. M. VOTAW AND MRS. M. ZEITLIN

SINCE THE report of this subcommittee was given in September, 1957, a tentative method has been approved and is published below.

Tentative Method pH Determination

Apparatus Required

(1) pH Meter: Any suitable instrument capable of obtaining a precision of ±0.1 unit.

(2) Glass Electrodes such as:

General Purpose, Beckman Red Label, Beckman Catalog No. 4990-80 for measurements of pH 9 or below. Temperature range: 5°to 100°C.

Beckman Type E (Blue Glass), Beckman Catalog No. 4990-75, High alkalinity (low alkali error) electrode for measurements from pH 9 to pH 14, Temperature range: 5° to 40°C.

OR

Beckman Type E-2, Beckman Catalog No. 4990-72 for measurements over the entire pH range, Temperature range: 15° to 100°C.

(3) Calomel reference electrode, such as the Beckman fiber type, Beckman Catalog No. 4970. Temperature range: −5° to 100°C.

(4) Soft cotton string (at least 1/16 inch in diameter) saturated with potassium chloride solution and used while wet.

Reagents Required

Buffer solutions of pH 4.0, 7.0 and 10.0. Certified buffer solutions may be purchased from most laboratory supply houses in either solution form or as a fast-dissolving powder.

Potassium chloride solution (KCl), saturated pH indicator test paper, such as Alkacid or Hydrion, sensitive to the nearest pH unit.

Procedure

Determine the approximate pH of the sample using indicator test paper. If the indicated pH is 9 or below, use general purpose glass electrodes designated #4990-80. If the pH is above 9, use the high alkalinity type E glass electrode designated #4990-75. The Beckman type E-2 glass electrode designated #4990-72 may be used as an alternate for either of the above electrodes and may be used anywhere in the pH range.

Part I—Standardization of pH Meter. See Note (a).

(1) Attach the electrode system with the proper glass electrode described above and the calomel reference electrode to the pH meter.

(2) Wash the electrodes thoroughly with distilled water and dry gently with clean absorbent tissue. See Note (b).

(3) The temperature of all solutions to be tested, whether buffer or test solutions, shall be brought to 25 ± 1°C. Electrodes shall be immersed in solution for several minutes, if necessary, to permit electrodes to reach same temperature as solution.

(4) Buffer solution of pH 4 is used for initial standardization when the general purpose glass electrode (#4990-80) is used and pH 10 buffer solution is used for initial standardization when the high alkalinity type E glass electrode (#4990-75) is used. The pH 4 buffer solution is to be used for the initial standardization of the type E-2 glass electrode (#4990-72). See Note (c).

(5) Place some fresh buffer solution in a beaker and in another beaker place a quantity of saturated potassium chloride solution. Set the temperature adjustment dial of the meter to the temperature of the buffer (25°C).

(6) Insert the glass electrode into the beaker containing the buffer solution and the calomel electrode into the beaker containing the saturated potassium chloride solution.

(7) Connect the buffer solution and the saturated potassium chloride solution with a 3-inch piece of string saturated with postassium chloride (wet). See note (d).

(8) Check and adjust, if necessary, the pH reading with the known pH of the buffer solution used following the manufacturer's instructions.

(9) Remove the glass electrode, wash thoroughly with distilled water and dry gently with clean absorbent tissue. Insert the glass electrode into a beaker containing fresh pH 7 buffer solution.

(10) Connect the buffer solution and the saturated potassium chloride solution with a new piece of string, saturated with potassium chloride, and check the pH reading. If the pH value obtained on the latter is not within ±0.1 unit of the correct value for the pH 7 buffer, a faulty electrode is probably to blame and new electrodes should be installed and checked as described above. See Note (e).

Part II—Determination of pH

(1) Wash the electrodes thoroughly with distilled water and dry gently with clean absorbent tissue. The type of electrode and standardization are based on a pre-

*Reprinted from the Journal of the Society of Cosmetic Chemists, Vol. IX No. 2, page 113, March 1958

liminary test for pH using indicator paper. See Part I.

(2) Insert the glass electrode into the sample being tested and insert the calomel electrode into a beaker containing saturated potassium chloride solution.

(3) Connect the sample being tested and the saturated potassium chloride solution with a 3-inch piece of string saturated with potassium chloride (wet). See Note (e).

(4) Read the pH of the sample in accordance with the manufacturers instructions for the instrument used.

Notes

(a) The pH meter should be standardized daily or before each series of tests. If a number of determinations are being made, check the meter against the two buffer solutions after every 5 determinations.

(b) The pH meter should be switched to a neutral or check position when the electrodes are being handled or are not immersed. This will prevent the possibility of polarization of the glass electrode which will cause the pH readings to be a few tenths high and a reading drift for several minutes after reimmersion.

(c) The electrode reaction of the type E-2 glass electrode may be improved by soaking the electrode in pH 10 buffer solution prior to use.

(d) The string may be prepared in the following manner. A ball of cotton twine is placed in a beaker, covered with distilled water, and the water heated to boiling. Heating is continued for several minutes, then the water is replaced with fresh distilled water and the operation repeated. This is done a number of times until visually the water is free of sizing or other material which may be leached from the cotton twine. This twine is then cut into appropriate lengths and stored under a saturated KCl solution.

(e) Each piece of string must be used only *once*.

Reference

Beckman General Instructions, "Type E-2 Glass Electrodes," Bulletin No. 361, May, 1955, Beckman Division, Beckman Instruments, Inc., Fullerton, Calif.

We have also made a start on two other problems we originally set for ourselves, that of shampoo viscosity or consistency. Here we have progressed only to the point of asking the members of the subcommittee for suggestions and ideas. As might be expected there is not the same meeting of minds as on the pH procedure; thus far, we have received suggestions for use of viscosimeters of various kinds, as well as flowmeters and penetrometers. A cursory examination of the problem leads to the opinion that we may need not one but several methods for viscosity measurements, perhaps one for cream or paste shampoos, one for thin liquids and one for viscous liquids. Additional problems become evident on further consideration. For example, shall we consider the initial resistance to flow or the resistance after application of a shearing stress? Which experimental technique will tell us the most about the flow characteristics of the shampoo? Perhaps the most cogent observation which has been made thus far is that we consider which attributes of the complex quantity we call "viscosity" we are most concerned with before we attempt to set up any procedures for its measurement.

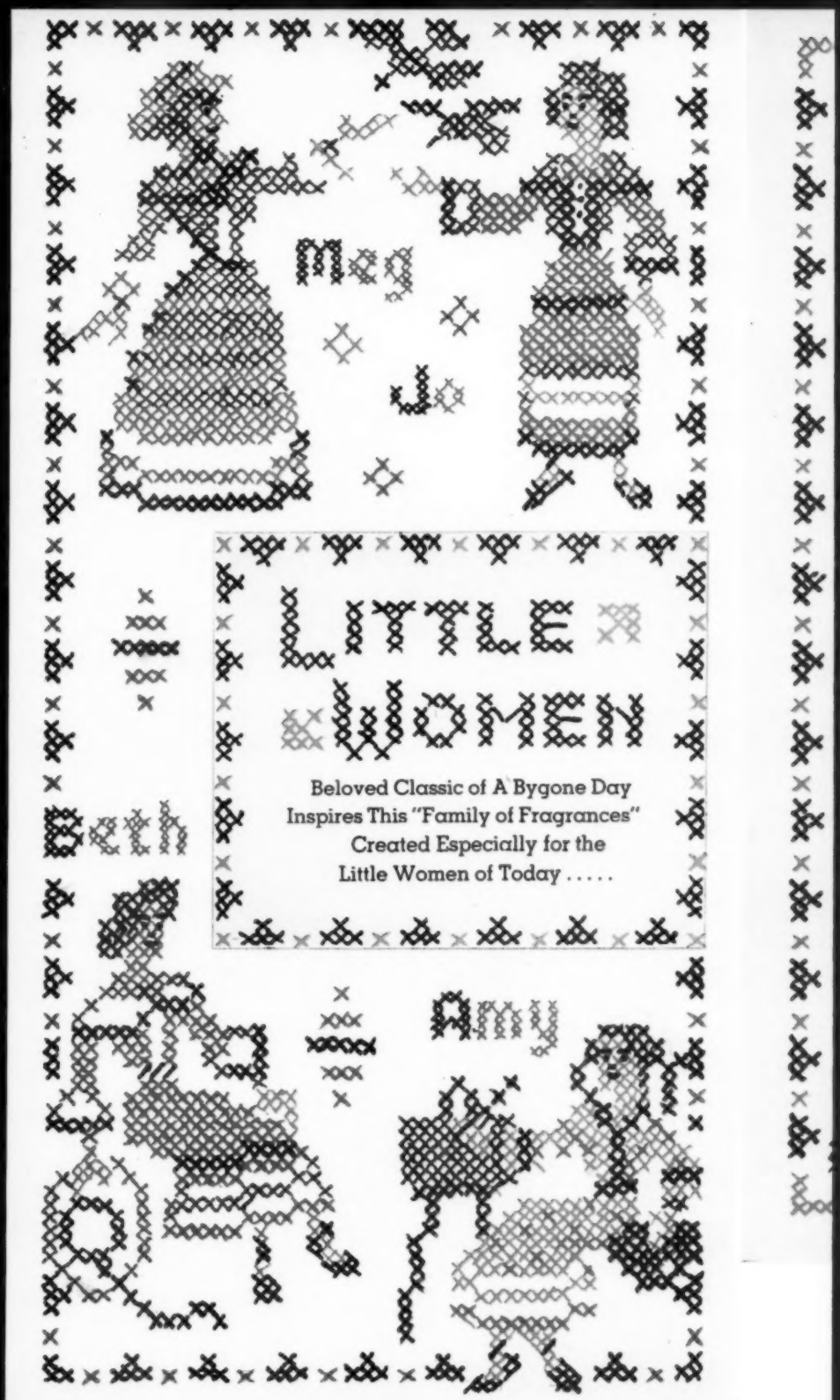
Standardized procedures for pH, viscosity, and other physical properties of cosmetic products are extremely desirable so that we may, in different laboratories, be able to speak the same language and have the same frames of reference. I believe that we have already considered some of the necessary benchmarks for such procedures. Among the most important are reproducibility, simplicity, and use of readily available equipment. Important as such procedures are I feel that the need is even greater for standard evaluation techniques for the performance properties of shampoos and related products. I say that the need is greater because there is so much less background and so much greater divergence of opinion on performance evaluations than on evaluation of physical properties. And, after all, our products are purchased by the consumer chiefly for their performance and not for their physical appearance—or at least we like to think so. Recognized and valid procedures for evaluation of foaming power, detergency, curl strength—to name just a few properties important in shampoo evaluation—would go a long way toward achieving more objective screening and more scientific study of raw materials and finished products.

Reproducibility of a procedure is not sufficient when we are dealing with performance characteristics, although it is, of course, an essential property. In the case of standardized procedures for physical properties we are setting up specifications for an inanimate object, the product itself. By the very definition of performance properties for cosmetics, we must concern ourselves with the interaction of the product and the human body. And this most decidedly introduces complications. We all know, of course, that no two human beings are identical and that the effect of a preparation on one person may be quite different on another. This is merely another way of stating that we must be sure that any performance test which is developed must be based on the use of sufficiently large groups of subjects so that the results may be considered statistically valid for the population at large.

Other considerations come to mind, as well. A test procedure for performance evaluation must be not only reproducible but must be able to predict with at least fair accuracy the results which will be obtained under actual consumer usage conditions of the product. Whenever possible, the performance tests should be set up so as to study the interaction of the product with the portion of the body to which the product is normally applied. Thus studies of shampoos should be made using human hair; studies of deodorants and antiperspirants should be made on the axillae, etc. Only when it is impossible to develop such direct measurement techniques should we consider other test procedures. It is possible, very often, to develop procedures using other than human hair or skin as the substrate but in all such cases steps must be taken to prove that data obtained in such a procedure can be correlated with results on the appropriate portion of the human anatomy. Not only must a procedure not based on actual usage conditions give the same relative order of effectiveness for a group of products as obtained under usage conditions but also the order of magnitude of the effects should also be the same. Otherwise, erroneous interpretations may be drawn from such data.

To summarize very briefly what I am saying, the function of a performance evaluation test is to enable us to work under standardized conditions to improve the performance of our products; the closer we keep to actual usage conditions, the more we should be able to rely on the result which our test methods give us.

It is on this note that I should like to close. I should like to urge all of you to give serious thought to the difficulties which may be encountered in development of test procedures and how to overcome them. We shall, of course, be interested in your opinion of the pH procedure we have outlined and your suggestions as to any future procedures we should be working on.



FRITZSCHE
BROTHERS, INC.

76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES AND *STOCKS: ATLANTA, GA., BOSTON, MASS., *CHICAGO, ILL., CINCINNATI, OHIO, GREENSBORO, N. C., *LOS ANGELES, CAL., PHILADELPHIA, PA., SAN FRANCISCO, CAL., ST. LOUIS, MO., MONTREAL AND *TORONTO, CANADA; *MEXICO, D. F., AND *BUENOS AIRES, ARGENTINA. FACTORIES: CLIFTON, N. J., AND BUENOS AIRES, ARGENTINA.

EST. 1871

. . . A fragrance to be loved and worn
with confidence . . . Refreshing,
clean and mildly sophisticated.

Amy

. . Dainty, appealing lily of the valley . . .
Dewy fresh, demurely sweet and
everlastingly lovely.

Jo

. . . A lively blend of florals . . . The
perfect accompaniment for an
exuberant, gay, youthful personality.

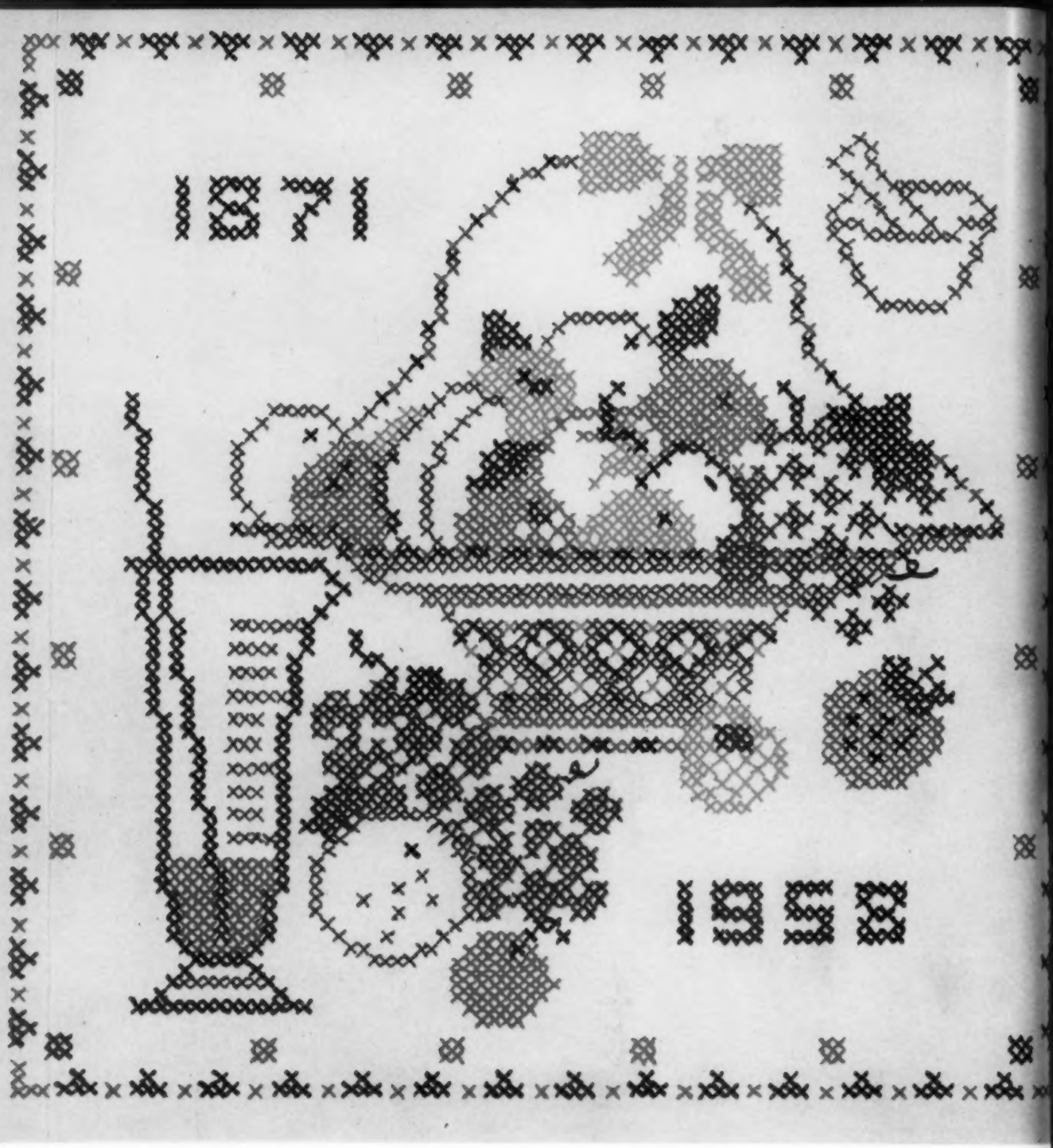
Beth

. . . Truly, a most beautiful fragrance . . .
A lilac blend . . . Tender, warm
and extremely wearable.

LITTLE WOMEN

A Fragrant Foursome of Captivating Perfumes for Milady's Growing Daughters . . . .

BY FRITZSCHE



SINCE 1871...

Embroidered samplers – now collectors' items – are cheerful reminders of the era in which FRITZSCHE was founded. In that 87 year span, FRITZSCHE has grown strong and has prospered. It has steadily accumulated and multiplied its resources in experience, scientific understanding and knowledge. It is ready and eager at all times to share these resources in solving its customers' fragrance and flavoring problems.

FRITZSCHE BROTHERS, INC.

76 NINTH AVENUE, NEW YORK 11, N. Y.

Photo courtesy of Richard Hudnut

A Pharmacologist Delves in Cosmetics

JOHN H. DRAIZE*

THE Division of Pharmacology of the Food and Drug Administration is often called upon to review dermal, mucous membrane and other toxicity data submitted for a new cosmetic formulation, or for ingredients thereof, and to express an opinion on the adequacy of such data in support of safety for use. In essence, the evaluation of such data represents an appraisal of the health hazards in the cutaneous or mucous membrane exposure to the product. Such appraisals involve fundamental problems in skin pharmacology. More specifically, these problems are associated with studies in percutaneous or mucous membrane absorption, and concern local and systemic effects following exposure to the cosmetic. Time does not permit the discussion in detail of all the factors involved in percutaneous absorption. There have been a number of reviews by Rothman (1), Calvery, Draize and Laug (2), Valette (3), Rothman (4), and Gemmell and Morrison (5), which deal with this problem in great detail.

Any substance which, when applied topically, is capable of eliciting a reaction, although such reaction is purely local and superficial in nature, demonstrates a certain degree of absorption. There are three fundamental factors concerned with percutaneous absorption:

1. Skin (gross anatomical and histological nature).
2. Innate nature of the substance to be absorbed.
3. Role of the vehicle.

The skin is a large, important and, histologically, a unique organ of the body. Unlike the parenchymatous organs, it is exposed to many and varied influences, often of a detrimental nature, such as wide variations in temperatures and humidity, or to many offending factors, such as chemical and physical irritants in man's environment. Anatomically, the skin, also unlike the parenchymatous organs, is a typically stratified structure consisting of three distinct entities—the subcutis, derma and epidermis. The epidermis itself, or the peripheral stratum, is further differentiated in five cell layers. The skin has many "breaks" or imperfections in its architecture (as represented by the skin appendages, sebaceous and sweat glands with their ducts and the hair follicles). Since the coarser sweat glands and hair follicles may extend as far as the subcutis, the skin, in a sense, represents a sieve-like structure capable of engulfing considerable material which, while no longer visible on the surface of the skin, may not be considered to have penetrated the skin or to be absorbed by it.

Another characteristic of the skin of man and warm-blooded animals is that the outer horny layer desquamates constantly and uninterruptedly and, in addition, the cells of the various epidermal layers, beginning at the level of the stratum granulosum and extending to the outermost portion—the stratum corneum—exhibit a gradual loss of viability and water content. It is also in these latter layers that cornification takes place. The process of cornification, producing the keratins of the horny layer, endows this section of the skin with tough refractory chemical substances to enable the skin better to withstand trauma. All this points to evidence that a primary function of the epidermis of mammalian skin is to exclude, slough off and expel materials rather than to abet the penetration of substances coming in contact with it.

Although the skin serves as an effective barrier to the inward transfer or percutaneous penetration of many substances, a review of the literature on this subject reveals that many substances, even if only to a

*Chief, Skin Toxicity Branch, Food & Drug Administration, Dept. of Health, Education and Welfare, Washington, D.C. S.C.C. Medalist's address. Reprinted from the Journal of the Society of Cosmetic Chemists, Vol. IX No. 2, March 1958 p. 125.

limited degree, may be absorbed percutaneously. In general, as better methods of chemical analysis have become available for the detection of substances in tissues and body excretions, it has been possible to demonstrate that a wide variety of substances may penetrate the skin. Newer technics employing radio isotopes, especially for substances for which sensitive methods of chemical analysis are not available, have afforded a new tool for the study of percutaneous absorption. Too often, however, radio isotopes have been employed simply to demonstrate whether or not a substance has penetrated the skin. Obviously, such procedures give little information from a pharmacological standpoint as to the biochemical fate of the substance, metabolic end products or the toxicity of metabolites.

In our consideration of the percutaneous absorption of substances, distinction should be made as to whether the skin at the time of exposure is intact or in varying degrees of damage. Differences in absorption (6) between intact skin and a skin damaged by simple abrasions can be most striking. Some workers even consider the simple removal of sebum and cell detritus, as with detergents, as capable of producing an unphysiological state in the skin. If this is true, a condition of truly normal skin is more rare than realized.

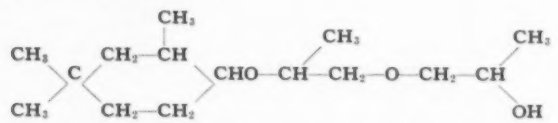
Many substances, upon repeated topical application, bring about a certain degree of serious skin damage. Such damage may be simple maceration or keratolysis, or as extensive as frank fissuring and ulceration of the epidermis, so that with subsequent application greater absorption of the material is obtained. On the other hand, some substances produce a precipitant or coagulative effect on the skin, resulting in a lessened capacity for absorption with subsequent applications.

Both artificial and natural membranes have been used to simulate skin in studies of percutaneous absorption. No such membrane can represent the entire physicochemical properties of the living skin, or its electrical properties, or such other additional differences as may be inherent in the penetration of the living cell membrane, the keratins, cell detritus and secretion and excretions of the appendages.

Nature of the Substance

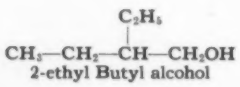
During the past eighteen years, the Skin Toxicity Branch of our Division of Pharmacology, has had occasion to acquire data on the percutaneous absorption of several hundred compounds. Review of these data in attempts to correlate, if possible, the percutaneous absorption of compounds with their molecular characteristics, such as molecule size, presence of molecular side chains or the length of molecular side chains, has failed to reveal much pertinent information.

It is remarkable, for example, that the skin is relatively impervious to simple molecules, such as water, or to simple electrolytes, such as sodium chloride, or to simple organic molecules, such as carbon monoxide and carbon bisulfide, when it readily absorbs, and with apparent ease, complex molecules of which the following are cited as examples:



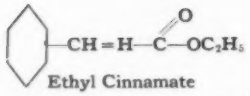
3, 3, 5-Trimethylcicylohexyldipropylene glycol ether

or



2-ethyl Butyl alcohol

or



Ethyl Cinnamate

Until more is known of the molecular structure of compounds in their relationship to the structural elements of the skin cells, it is believed that it will be impossible to predict either the manner or the extent of the percutaneous absorption of a compound by mere inspection of molecular structure.

Role of Vehicle

There is little doubt that a vehicle may play a significant, although not a direct, role in percutaneous absorption. It may not be considered direct in the sense that it carries a material directly into the cell, or that it accomplishes an action which would not occur in the absence of the vehicle. The role of the vehicle in percutaneous absorption has been overemphasized. One must understand that some vehicles in themselves are skin irritants and are capable of producing damage or an unphysiological condition in the skin. The presence of organic solvents or surface-active agents may affect percutaneous absorption. The action in these cases may be: (1) permitting better physical contact between skin and the material to be absorbed; or (2) reducing surface tension of materials and skin and thereby producing better wettability of the skin with the material to be absorbed; or (3) permitting better physical solution of the material to be absorbed and therefore easier and more complete access into the lumen of the ducts of the appendages. Aside from these, however, there is no evidence that a vehicle, *per se*, can actually promote absorption of substances in or through the dermal cells.

Extent of Use and Design of Experiment

During the course of conferences with members of technical staffs of concerns and by direct inquiry, the Food and Drug Administration is often asked the type and nature of pharmacological and toxicological tests on products to develop data which would be adequate to demonstrate safety for use. The requirements or extent of such tests will vary and will be dependent on the manner, condition and extent of use of the product itself. Some cosmetics are used infrequently; examples are hair wave lotions, depilatories and hair dyes. The majority of cosmetic products are employed often daily to several times a day, and over the greater portion of the individual's lifetime, not infrequently by persons in various conditions of health.

The cosmetic itself may vary in its inherent toxicity. Although many cosmetic preparations are relatively inert or nontoxic, some may exert profound local or systemic effects. A substance which can alter hair structure to permit waving, or one capable of rapid keratolysis, as in the case of depilatories, may exert profound local or systemic effects on absorption. In such cases their toxicology and limitations in use must be well understood, and such products must bear adequate label directions to prevent harm to the prospective user.

The proper planning of experiments to be undertaken must take into consideration the extent of the total body area involved, frequency of application, amounts administered and condition of the skin and mucous membrane at time of application. Animal experiments (7), both as to procedure and duration, are decided upon after the following factors have been carefully considered for the product in question:

I. Extent of use on the body
   A. Area involved

1. Per cent of total skin area
2. Appendages (nails, hair, etc.)
3. Mucosae (oral or eye)

B. Frequency of application
1. Number of times (several times daily, daily, weekly or less often)

C. Duration of treatment
1. Daily throughout the year
2. Monthly or bimonthly (depilatories, hair waving)
3. Seasonal (sunscreen preparation)

II. Physiological condition of the skin
A. Normal skin
1. Age and sex differences
2. Race differences

B. Pathological (damaged) skin
1. Eruptive conditions due to disease
2. Abrasions (mechanical)
3. Abnormal through weather effect (sun and wind burn)

Pharmacology and Toxicology

Although man is not excluded, moral considerations and jeopardy to human life would not permit the necessary experiments on this subject to yield the data required on pharmacology, biochemistry and pathology to permit a full appraisal of safety. It would be incorrect to state that all possible effects of a cosmetic can be predicted from the results of animal experimentation. However, thorough animal data should yield information on a margin of safety, seriousness and extent of possible injury, even to a prognosis for the repair of such injury.

Reactions following exposure of the skin or mucous membranes to topical preparations may elicit (1) local effects; and (2) systemic effects. The local effects are more properly termed "irritations," a general term used to describe an eczematous or contact dermatitis in case of skin, or of inflammation in the case of mucous membranes. Skin irritation may result from contact with substances which are primary irritants, or with substances producing sensitizations. A third type of local effect on the skin is recognized—it is termed "skin fatigue."

Local Toxicity or Irritation

If a tissue is able to deal with an excitant (irritating substance), the reaction is normal and stimulation results. If the action of the excitant is excessive, the reaction is pathological and irritation results. Irritation is an extreme reaction of tissues to an insult or injury and is best characterized as incipient inflammation. The inflammatory process may vary from a barely perceptible hyperemia to edema formation and vesiculation, and finally to an intensive suppurative process. Interestingly, what is measured is not irritation, *per se*, but the result or consequence of irritation, that is, the injury reaction following irritation.

A primary irritant may be defined as a substance capable of producing an injury reaction on first contact. The resultant injury will depend on:

1. Nature of irritant
2. Concentration of irritant
3. Total elapsed time of exposure

Cutaneous sensitization represents an allergy to a chemical which is not obtained on first contact, but requires a number of prior exposures for development. The number of prior exposures required to produce reactions may vary greatly depending on the sensitizing potential of the agent. The sensitized tissue exhibits a greatly increased capacity to react to subsequent exposures of the offending agent. Indeed, subsequent exposures may produce severe reactions wih little correlation to amounts of excitant involved. The human race is so heterogeneous in its reactions that few chemicals have not been incriminated at one time or another as producing sensitization. It is this heterogeneity of man which makes it difficult to establish a rigid criterion for experimental tests, whereby a substance should or should not be considered acceptable on the basis of its sensitizing propensities. Realistically, such criterion of acceptability must rest not only on the incidence of reactions observed experimentally, but on the seriousness of the reactions when such occur.

"Skin fatigue" is a misnomer in that this term does not imply a condition in which the skin is no longer able to carry out its normal physiological functions. Chemicals capable of producing this phenomenon are well tolerated by the skin at first (and in this respect are unlike primary irritants) and quite abruptly in continued use may produce reactions not unlike cutaneous sensitization. However, such reactions differ from sensitization in that in a relatively short while (few days or weeks), the skin is again able to tolerate the substance as well as it did at the time of the original exposure. The mechanism of action for this phenomenon is not known; it is more commonly observed during the hot summer months when it is conceivable the skin could be under greater environmental stress.

Systemic Toxicity

Data on the systematic toxicity of substances applied topically to the skin and mucous membranes (7) are obtained in small laboratory animals. The albino rabbit has been found well suited for the bulk of the dermal toxicity studies. Experimental procedures in animals should yield data on the extent of injury, if such result, and a margin of safety in use. Procedures for the study of local and systemic toxicity are given in brief outline below.

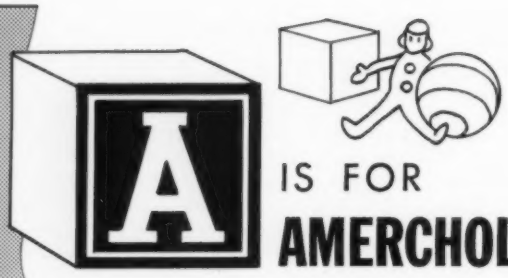
I. Determination of dermal toxicity
A. Acute (single exposure of 24 hours or less)
1. Intact skin
2. Damaged skin
(a) Disease
(b) Abrasion (mechanical)
(c) Burn

B. Subacute (multiple exposures)
1. Short or 20-day
(a) Skin intact and abraded
(b) Cosmetics, infrequently used
2. Long or 90-day
(a) Skin, intact only
(b) Majority of cosmetics
(c) Dose levels employed
(1) Determination of base line dose, depending on label directions
(2) Demonstration of margin of safety

II. Biochemical studies—analytical methods
A. Excretion studies
B. Tissue storage
C. Organ function tests

III. Hematology
A. Hemoglobin determination
B. Differential cell counts
C. Abnormalities of formed elements
D. Other tests as indicated, e.g., clotting time, flocculation time, hematocrit, etc.

IV. Pathology
A. Gross examination of tissues, and recording of organ weights
B. Detailed microscopic examination of tissues



A IS FOR AMERCHOL®

A real dermal treat
Keeps skin youthful,
With moisture replete.

The AMERCHOLS head the list of skin moisturizing ingredients in use today —and with good reason. They are natural hydrophilic, non-ionic emulsifiers and surfactants derived from cholesterol and related sterols of pure lanolin origin.

Because of their unusual emollience and spreading characteristics, the AMERCHOLS are invaluable in make-up preparations as well as in creams, lotions, aerosols, baby toiletries, shaving preparations, hair products and ointments. The AMERCHOLS are hypoallergenic and non-irritating. They are soothing and safe for use on the most delicate tissues.

The AMERCHOLS are available in both liquid and solid forms.

Write on your business letterhead for complete technical literature, suggested formulas and samples.

American Cholesterol Products
INCORPORATED

AMERCHOL PARK — EDISON, N. J.

V. Local toxicity
   A. Primary irritation
   B. Sensitization
      1. Guinea pig intracutaneous technique (shortcomings of method)
      2. Man
         (a) Repeated insult technic
         (b) Shortcomings of limited exposure such as "prophetic tests" involving few or limited exposures
   C. Skin fatigue

VI. Acute oral toxicity of topical preparations
   A. Preferably in two species of animals (one, a nonrodent)
   B. Toxicity information, in case of accidental swallowing

Important as it is to obtain pharmacological and toxicological data on individual components of a cosmetic formulation, such data may be insufficient if the resulting biological reactions elicited by a formulation represent more than a simple addition of effects of the component parts. In other words, data on the final formulation are necessary to demonstrate whether synergistic effects are produced by compounding.

Tests should be conducted on the same type of tissue as will apply in normal use. Results obtained in tests on one type of mucous membrane may not necessarily be valid to demonstrate safety for use on another type of mucosa where secretions, pH conditions and absorbing capabilities may differ significantly. To a limited extent this is also true of various skin areas of the body where pH, thickness and physiological condition of the epidermis may vary.

Summary

Thorough animal experimentation as outlined above for cosmetics should yield data on the pharmacology, biochemistry and pathology to enable a calculation of safety in use. Animal data are obtained on a relatively uniform and standardized experimental subject; that is, selected on the basis of maximum homogeneity as to age, health, diet and environment. Results obtained on highly uniform subjects do reflect more accurately the effects of treatment. Such uniformity of results would be difficult to obtain for man, who, as stated above, is probably the most heterogeneous species of the animal kingdom. It would be difficult to define so-called normal man since diet, age, state of stress (health) and environment are some of the variables which may affect his response, but it is this heterogeneity of man which makes certain clinical investigations desirable and essential. However, clinical investigations should not be attempted before the pharmacologist, the biochemist and the pathologist have, through their animal studies, arrived at a probable level of tolerance for man. The question of ultimate safety for use in cosmetics is of vital importance and concern to the user who must be protected from harm; it also concerns the governmental regulatory agency which has been delegated the responsibility in these matters by Congress; and finally, it concerns equally and vitally the cosmetic manufacturer if he wishes to continue and prosper in his business.

References

(1) Rothman, S., *F. Lab. Clin. Med.*, 28, 1305 (1943).
(2) Calvery, H. O., Draize, J. H., and Laug, E. P., *Physiol. Rev.*, 26, 495 (1946).
(3) Valette, G., *Acta Pharmacol.*, 1, 127 (1949).
(4) Rothman, S., "Physiology and Biochemistry of Skin," Chicago, University of Chicago Press (1954).
(5) Gemmell, D. H. O., and Morrison, J. C., *F. Pharm. and Pharmacol.*, 9, 641 (1957).
(6) Laug, E. P., and Draize, J. H., *F. Pharmacol. Expt. Therap.*, 76, 179 (1942).
(7) Lehman, A. J., *Food, Drug, Cosmetic Law F*, 10, 679 (1955).

Photo courtesy of Elizabeth Arden

Scientific Formulation of Cosmetics

PAUL G. I. LAUFFER, Ph. D.*

THE origins of cosmetic formulation are lost in antiquity, but it is apparent that from earliest historical times the unguents and lotions used for personal adornment and beautification were a part of the stock in trade of the pharmacist or his predecessors. This report will discuss how that newcomer science was applied to the ancient cosmetic art and how science is now being applied to some cosmetic problems.

Until recent years, cosmetic products were made according to formulas of unknown origin, which were handed down from generation to generation. Since medieval times, cosmetic formularies have printed and reprinted essentially the same assortment of recipes for beauty preparations. A classic example is the formula for cold cream, which was either devised by the second-century physician Galen or handed down by him from an earlier source. Many pharmacopeias still use Galen's formula, improved in stability by the use of borax to form emulsifying soaps from the fatty acids of the oil and wax, and refined in a few other minor details.

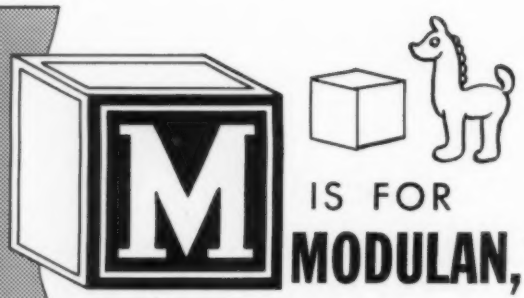
It was formerly common practice for the pharmacist to compound toilet preparations, following formulas printed in various formularies. "The Chemist and Druggist," a book of pharmaceutical formulas published in 1911, devoted 243 of its 832 pages to toilet preparations; Hiss and Ebert's "New Standard Formulary," 1920 edition, contained 140 pages of recipes for perfumes and toilet articles. In addition to these traditional formulas, unknown numbers of secret recipes were worked out by less communicative individuals and used for their own brands of beauty products. Since secrecy has been the preferred means of protection, relatively few patents have been issued for cosmetic products.

The great impetus for improvement of cosmetic products by application of scientific principles came in the 1920's when national brands became important in the toilet-goods field. World War I taught us that we could manufacture our own chemical materials and convinced manufacturers that their products should be improved and standardized by scientific formulation and control. The volume of business attained by national advertising enabled firms to support the cost of laboratories for control and development.

The manufacturer of cosmetics naturally wishes to make products superior to those of his competitors. His brand must have qualities to which he can point with pride if he is to hold a share of the market. He must always have in mind three watchwords: attractiveness, efficacy, safety. Each improvement in a cosmetic product should enhance one or more of these qualities without detracting from the others.

In the early days of cosmetic laboratories, the raw materials available were largely those which had been used for years in standard formulas. The functions of the laboratory centered about selection of the best sources of supply for these materials and improvement

* Director of Research, Northam Warren Corp. Paper presented at the Symposium on Cosmetics in cooperation with the Section on Pharmacy at the 123rd annual meeting of the American Assn. for the Advancement of Science. Reprinted from the Journal of the American Medical Assn., Feb. 15, 1958. Vol. 166. No. 7, P. 771. Copyright 1958 by American Medical Assn.



M IS FOR MODULAN,®

Emollient supreme,
For skin and hair
Works like a dream.

Yes, MODULAN is above all an emollient. It is lanolin, modified by acetylating the hydroxyl groups to gain extremely valuable new conditioning properties and effects when used on skin and hair.

(U. S. Patent No. 2,725,334 and foreign patents.)

MODULAN is hypo-allergenic and non-irritating.

Some of the outstanding characteristics of MODULAN ARE —

Oil soluble, hydrophobic
Substantive yet permeable films
Practically odorless
Soft-waxy, non-tacky protective films
Compatible with o/w emulsions
Compatible with soaps and foams

MODULAN is particularly recommended for use in creams, lotions, baby oils, hair preparations, shaving creams, cream shampoos, lipsticks and ointments.

We would be happy to supply you with technical literature, suggested formulas and samples. Please write on your business letterhead.

American Cholesterol Products
• INCORPORATED •

AMERCHOL PARK — EDISON, N. J.

of products by (1) altering the proportions of the traditional ingredients, (2) use of old ingredients for new applications, or (3) changes in methods of processing. Since these activities are still essential to the operation of a cosmetic laboratory, it will be worth while to describe them briefly.

Quality of Ingredients

Obviously each ingredient must be of satisfactory quality, uniform from lot to lot, if the cosmetic product is to be kept at a consistently high level of excellence. It is not always easy, however, to designate all the desirable and undesirable qualities of a given ingredient and to devise adequate tests for disclosing the presence or absence of each. Even more difficult may be the establishment of quantitative methods for evalulating the essential features.

Standard determinations of the more common physical and chemical properties are made on most ingredients. Naturally, the greater the number of properties evaluated, the smaller the danger of mistaken identity, adulteration, or inadequate purity. Some cosmetic ingredients are complex mixtures containing many chemical constituents; each physical property of such a mixture is an average which may remain constant despite considerable variation in composition. Actual fractionation of such complex materials and determination of their composition are out of the question as routine control operations. New instruments, such as the vapor chromatograph, are making it possible, however, to at least approximate the composition of mixtures of volatile substances (e. g., perfume oils) very rapidly.

Best Use of Ingredients

Given materials of the best quality, the cosmetic chemist must determine how they may best be combined into cosmetic products. Let us limit our discussion for the moment to the traditional ingredients. We find that many improvements may be achieved through alterations in the laboratory procedures which have been mentioned previously.

Altering Proportions.—In any standard formulation, improvements may frequently be made by changing the proportions of the ingredients. When the number of components is large, a systematic check of all possible combinations is a rather formidable undertaking. A scheme of attack should be devised with the aid of statistical principles, so that all essential information will be obtained without wasted effort.

Altering Procedures.—A given formula may result in products varying considerably with changes in the compounding procedure. Such changes include those introduced by using different equipment. Many factors can be expected to affect the properties of a cosmetic product, such as temperature of mixing, rate of cooling, rate of stirring, and duration of stirring. Here again, experiments must be planned to cover the field adequately with economy of effort. Laboratory equipment should be similar to plant equipment in essential features.

New Products from Old Materials.—Cosmetic products may be developed for hitherto unknown uses simply by using standard materials in combinations best adapted for the new application. Thus, a moustache wax has been converted into an eyelash cosmetic. Imagination and ingenuity are the principal requisites for success in developing new uses for standard materials.

Product Control.—After a satisfactory product has been developed, it is important that each batch manufactured be subjected to tests of the most discriminating

nature in order to determine whether quality standards are consistently maintained. Such controls have been regulated to such an extent that deviation from the acceptable standard is rare.

Modern Cosmetics

Up until now the discussion has been limited to a description of the basic procedures in the cosmetic laboratory, those which have been established by tradition as fundamental in assuring good products. In the past two or three decades, there have been superimposed upon such basic practice the activities that represent the attempts of leaders in cosmetic technology to excell over the performance of the past. These activities grew out of the fact that, as the resources of cosmetic manufacturers enabled them to staff their laboratories adequately, it became clear that cosmetic technology could be vastly improved by borrowing materials and techniques from other allied technologies and by applying principles set forth in the sciences underlying those technologies.

New Materials

The most obvious progress made in modern cosmetic practice is connected with the use of recently developed materials. However, inasmuch as the tonnages of raw materials used in cosmetic products are rather small compared with the total output of the chemical industry, it is natural that new chemical products are, as a rule, developed for applications outside the cosmetic industry. On the other hand, cosmetic manufacturers are often able to utilize materials whose cost makes them prohibitive for most other applications. This fact has led to the development of a limited number of materials primarily for cosmetic use. Typical of such materials are the so-called aromatic chemicals used as ingredients of fragrances. The cosmetic industry and the allied perfumery industry are the principal users of high-grade odorants.

New materials under consideration for use as cosmetic ingredients must be evaluated to determine whether their use will actually result in improved products. Materials of disagreeable odor or of dark color are automatically ruled out in most cases. Any unfavorable data on toxicity or irritating quality would also disqualify a material. The more promising materials are used as ingredients of laboratory batches of cosmetic products in order to assess their effect upon the texture, consistency, appearance, and odor of these products. If such tests are encouraging, pharmacological tests are then undertaken to secure sufficient data demonstrating that the material can be adjudged safe for human use in the concentrations and under the conditions of the projected use. Panel tests are also conducted to show whether the product containing the proposed new material is preferred by reason of superior attractiveness or efficacy to a control of known acceptability.

Sciences Underlying Cosmetic Technology

The cosmetic manufacturer who might attempt to carry on these activities on an empirical basis would find himself swamped by the amount of work involved. The work is greatly lessened in amount and increased in effectiveness if all available scientific principles are used, thereby eliminating experiments of low promise. The data most useful are those correlating chemical composition and structure with physical, chemical, and biological activity. The behavior of a material of given chemical structure can be predicted, within limits set by the incompleteness of our knowledge of structure-activity relationship.

On looking at cosmetic problems from another angle, it is obvious that both the efficacy and the safety of cosmetic preparations can be predicted either by empirical methods or by using all avalable scientific knowledge of the composition and functioning of the tissues involved and knowledge of the manner in which substances of given chemical structures affect such tissues. The data applicable to such predictions of cosmetic effect may be drawn from studies by scientists of many disciplines, ranging from mathematical physics to many subdivisions of the biological sciences. The middle ground of this vast scientific area is chemistry. There is some justification in referring to the whole body of data bearing upon cosmetic technology as cosmetic chemistry, since the data are, in general, most useful after they have been reduced to chemical terms.

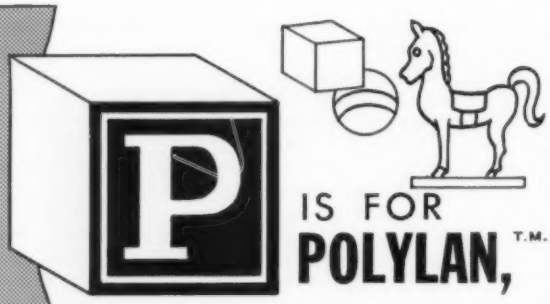
To make a comprehensive list of all sciences contributing to cosmetic technology would be a formidable undertaking, but some of the more obvious connections will be briefly described. Anatomists and histologists have studied, described, and pictured the structure of the skin and its appendages. Cytologists have peered into the individual cells and described the particulates coexisting there. Histochemists and cytochemists have identified components of tissues and cells, refining the techniques of the microchemist to the point where the cell particulates are beginning to divulge their composition. Enzymologists have provided means for detecting and measuring hundreds of the catalysts which promote the chemical reactions essential for life and health of cells and tissues. Protein chemists are constantly increasing our understanding of the mechanisms whereby each enzyme attracts the molecule of its own specific affinity, twists it into a more active shape, induces it to react with another molecule, then releases the new molecule and proceeds to repeat the cycle.

Structural chemists are refining our knowledge of the effects long known vaguely as "steric hindrance" and are defining "molecular shape" so as to enable us to associate certain chemical and physical properties with definite groupings or physical measurements of the molecule. Synthetic chemists have confirmed the basic tenets of protein structure by synthesizing small peptides with physiological potency, such as oxytocin. Chemical physicists have measured bond lengths and angles, calculated electronic configurations in simple molecules, and devised methods of approximating such configurations for larger molecules, thus laying the foundation for structure-activity deductions.

Many thousands of scientists have thus uncovered the facts and developed the concepts which enable us to describe the structure and function of living matter, from gross anatomy and physiology to electronic orbits. Yet the most fundamental studies, those establishing the electronic configurations of molecules, are the most fragmentary, for they are indeed difficult and time-consuming. Only in 1954 was the first attempt made to correlate the physiological potency of a series of hydrocarbons with their molecular configurations as calculated by quantum-mechanical methods.[1] The need for penetrating investigation is being recognized more and more, and fundamental problems in the life sciences are likely to receive more attention, especially through federal support of research, as awareness of the need spreads.[2]

Contributions from Allied Technologies

The cosmetic chemist must be an opportunist, scanning the scientific literature for new facts and concepts applicable to his technology. The total gross sales of the



P IS FOR POLYLAN,™

For skin way ahead,
Essential fatty acids
To lanolin wed.

Yes, the bells are ringing for this outstanding new development of our Research Laboratories. POLYLAN is the 100% active liquid wax ester of linoleic acid and fractionated lanolin alcohols. We have achieved essential unsaturation (Iodine no. 120) without sacrificing stability, and offer a product with remarkable penetration and emollient effects.

Cosmetic and pharmaceutical chemists are aware of the importance of unsaturation in epidermal metabolism. We invite you to try POLYLAN wherever essential unsaturates are indicated to improve the effectiveness of a cream, lotion or pharmaceutical product.

Write on your business letterhead for samples, literature and suggested formulations.

AMERICAN CHOLESTEROL PRODUCTS, INC. AMERCHOL

American Cholesterol Products
• INCORPORATED •

AMERCHOL PARK — EDISON, N. J.

cosmetic industry, some 800 million dollars a year, result in a net income which would support only a modest fraction of our country's 5-billion-dollar research program. Much fundamental research and some applied research undertaken for allied technologies will yield results enlightening for cosmetic problems. Foremost may be the vast program of the National Institutes of Health, whose annual budget of over 80 million dollars is spent largely for research in pure and applied biochemistry, both inside their own facilities and through grants to hundreds of universities, research institutes, and private laboratories. However, this budget for basic research in the life sciences may be compared with the 1,750 million dollars spent by the United States government for scientific research in the fiscal year of 1954.[2]

Hospitals, medical schools, and university departments of chemistry, biochemistry, biology, and physiology have contributed extensively to the advancement of the cosmetic industry, not only to basic studies but also to research on subjects of more immediate application. Dermatologists, for instance, are especially concerned with studies of the skin, and their work has been most valuable in pointing the way to many outstanding improvements in cosmetic practice. An example is the work of Blank[3] and associates on emollients, which revolutionized the thinking on skin-treatments cosmetics. It had long been assumed that the outer layer of the skin was kept soft and supple by its content of oil or fat, that loss of oil was all that was necessary to make it hard and horny, and that absorption of oil would cause it to become soft and supple again. Blank showed, however, that the water content of the outer layer of the skin is the determining factor in softness, that hard, horny skin could be resoftened merely by exposure to a humid atmosphere, and that oils help soften the skin only by assisting it in absorbing or retaining moisture. As a result of this research, emollient materials and compositions are now being evaluated on the basis of their ability to keep the skin moist.

Cosmetic chemists have learned much from the textile industry, whose scientists have made extensive studies of wool and detergents, the results of which are applicable to human hair and to the surface-active agents used in cosmetics. Leather chemists have expanded our knowledge of the components of the skin, such as collagen and elastin, so important in maintaining the skin's elasticity. Other technical data applicable to cosmetic technology may be obtained from (1) studies of the pharmacological effects of drugs as related to chemical structure, (2) studies of the mechanism of antigen-antibody reactions, and (3) studies of the composition of complex raw materials, such as hydrous wool fat (lanolin) and the waxes.

In citing the multitudinous fields of science impinging upon cosmetic technology, there is no intention of implying that the cosmetic chemist aspires to competency in all these fields. Naturally, the expert must be called upon to design or supervise effective work in his field of specialization and to make important decisions based thereupon. However, the more the cosmetic chemist understands about the methods and the outstanding advances of the basic sciences mentioned, and the more alert he is to adapt to his own problems the discoveries of sister technologies, the more effective will be his efforts to create safe, attractive, and efficacious cosmetic products.

References

1. Pullman, A.: Electronic Structure and Carcinogenic Activity of Aromatic Hydrocarbons, Bull. soc. chim. France, 1954, pp. 595-603.
2. Consolazio, W. V., and Green, M. C.: Federal Support of Research in Life Sciences, Science 124:522-526 (Sept. 21) 1956.
3. Blank, I. H.: Mechanism of Action of Agents Used for Relief of Dry Skin, Proc. Scient. Sec. Toilet Goods A., no. 23, pp. 19-23, May, 1955.

There's nothing like a new hat

to pick up the spirit and add beauty to the wearer.

And there's nothing like a new Goldcôted Richford Basket-Weave Cap to transform ordinary jars and bottles into radiant, sales-winning containers for your products.

RICHFORD CORPORATION

Offices and Plant:
3618 Oceanside Rd.
Oceanside, N. Y.

Showrooms:
Empire State Bldg.,
350 5th Ave., N. Y., N. Y.

New PACKAGING and PROMOTION

1.

2.

1—PRINCE MATCHABELLI

Prince Matchabelli has added a new name to its colognes of the seasons. The Golden Autumn Cologne package features a flame-orange oak leaf emblazoned on a shiny white box with jet black sides. Golden Autumn related items include spray mist and dusting powder.

2—LENTHERIC

Lentheric is embarking on an extensive pre-Christmas campaign to emphasize its perfumes. The perfume packages will not be changed, but to highlight the Christmas perfume campaign, Lentheric has created a three dimensional window display of soft grays, white and black, with four-color photographs of the Lentheric perfume bottles, appearing on a pillar of gray. To the right of the pillar, a bouquet is set in the base of the display, against a background of white. In front of the flowers is a swirling bowed front which carries the copy "Perfumes by Lentheric . . . Personality in Fragrance." The lettering is in gold.

3—DUBARRY

Dubarry announces the introduction of a new eye shadow stick in four shades: Turquoise, Emerald Green, Royal Blue, and Star Silver. The Eye Shadow Stick case is a golden shaft, a twin design to the DuBarry Royal Lipstick case. Dealers are offered this two-color counter display unit holding twelve pieces.

4—LANOLIN PLUS

Vazol, the new medicated spray vaporizer product of Lanolin Plus is now moving into national distribution. It is a medi-

3.

4.

5.

cated mentholated, antiseptic aerosol for the relief of colds, laryngitis, hay fever, etc. The product will be backed by national advertising starting in October with saturation TV, radio spots, newspaper and strong point-of-sale.

5—SHULTON

This Old Spice Gift Set by Shulton includes Old Spice Brushless or Lather Shave Cream with featherweight plastic bottles of Old Spice After Shave Lotion and Spray Deodorant, all gift packaged in bright red with white sailing ship and waves of gold. Retail price is $2.00 plus tax.

6.

6—HELENA RUBINSTEIN

Helena Rubinstein presents what is reportedly the first exclusive blend of powder and moisturizing foundation in her new "Heavenly Glow" Compact Make-Up. The compact is refillable, and features a design of gold-colored signs of the Zodiac on a simulated tortoise shell case.

7—WILDROOT

The Wildroot Co. of Buffalo has introduced its Cream Oil in a nitrogen-charged pressure can, with a gold and black label. The new container holds six ounces of hair tonic. The new package is being featured on the CBS-TV network show, "Robin Hood," sponsored by Wildroot and is backed by a newspaper campaign in 200 markets. This fall Wildroot will add radio and TV spots to the campaign.

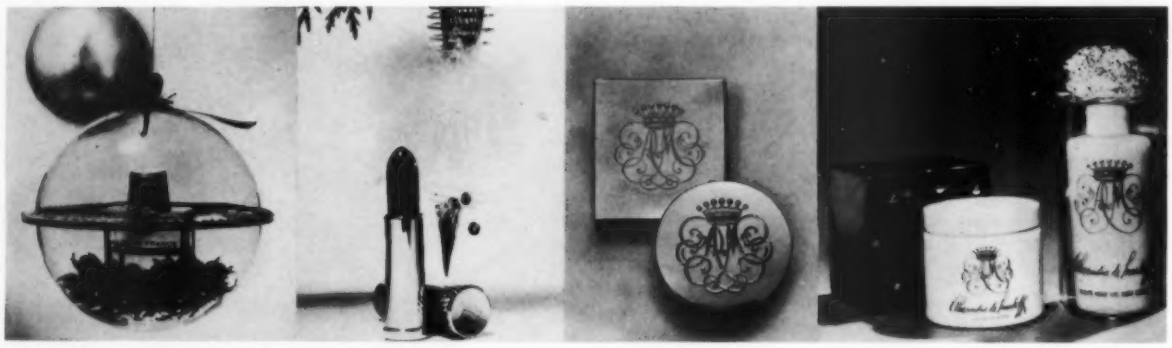
7.

8—CIRO

Ciro's new Parfum Mist, a perfume aerosol dispenser small enough to be carried in a woman's purse, will be available throughout the country this fall. Under three inches long, the metal case has a brushed gold effect with stainless steel inner case which holds the perfume. The refill cartridge will be available in January. Parfum Mist is packaged in a slender gold rectangular box with white recessed lining. The color of the label will vary with the fragrance.

8.

Christmas Packaging



Alexandra de Markoff presents, on the left, this transparent sphere to be hung from a Christmas tree. It is trimmed with silvery sequins and topped off with a touch of Christmas berry trim. Inside, two drams of imported Tiara perfume set into a miniature holly berry wreath. $5.00 plus tax. Another tree hanger, this fluffy-feathered gadget conceals an Alexandra de Markoff Magnum Lipstick retailing at $2.00. A Coronet Golden Compact with Elixir pressed face powder in five shades retails at $5.00 and on the far right, a pair of skin smoothers. Hand Beauty Cream, in a shimmering green package with a red velvet star. 4 oz., $1.50. Tribute Hand and Body Lotion, in a plastic bottle. Gift wrapped in a transparent sleeve with a star splashed pom pom on top. 5 oz., $2.00. All prices plus tax.

Lentheric presents, left to right, four of its famous perfumes, Tweed, Shanghai, Dark Brilliance and Adam's Rib in their usual attire but presented for Christmas buying in a new counter display. Tweedie Toiletries is showing many different Tweedie cut out packages, each featuring a different activity. This particular one is "Tweedie's Party Box" containing Toilet Water with atomizer spray attachment and five bubble bath packets. To the right, the Tweed Deluxe six piece set, with cologne, mist, bath powder, jeweled purse perfume, and cream sachet. The box is decorated in a sparkling gold and white marble design, and the toiletries nestle in white satin. $12.75 plus tax. For the Men, The Kings Kit by Kings Men. It contains after shave lotion, cologne, hair tonic, talc and spray deodorant. The cover of the kit is turquoise, black and white, with bold black and white stripes marking both sides of the cover. The kit retails at $5.00 plus tax.

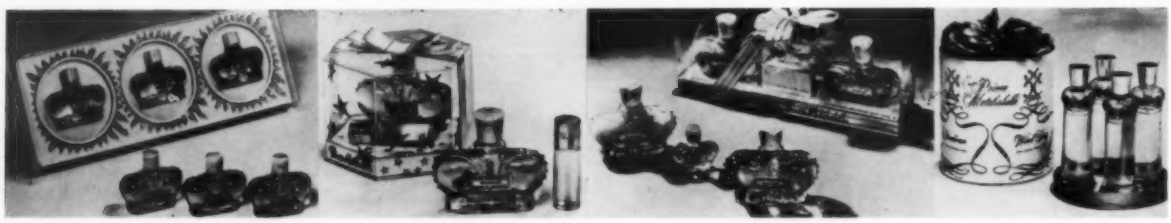
From the left, Tinkerbell's Bouquet, Hand Lotion and Bubble Bath team up in a colorful trio under the awning as a two dollar retailer. Next is the new Handy Jr., a one dollar retailer in a colorful see-through gift case. Then comes Tinkerbell's Pretty Closet filled with delicately scented glamour aids. Two bars of soap fill the closet shelves, talcum and toilet water in the main section. Priced at $1.75. On the far right is the new Handy Traveler, packed with toilet water, bubble bath, hand lotion, after bath lotion, Pink 'n Pretty lipstick and a comb. This package also serves as a colorful handbag. The Handy Traveler is priced at $2.95.

On the left, Seaforth's Dress Review. In a shiny red gift box, mounted on a white-and-gold striped background are Seaforth's Minute Shave, After Shave Lotion, Solid Deodorant, Men's Cologne, and Talc. $5.50 plus tax. To the right, Travel Kit. A red-and-black Scots plaid zippered carryall, with yellow rubberized lining, and equipped with leakproof plastic squeeze bottles of Shave Lotion, Men's Cologne, Talc, and Spray Deodorant. Priced at $5.00 plus tax. A companion piece is the Duffel Bag, on the right. A red-and-green Scots plaid duffel kit, with simulated leather trim and drawstring. Inside, Shave Lotion, Men's Cologne, and Spray Deodorant. It all comes in a red gift box. On the right, Seaforth's Wee Scot Set, a three stage rocket of grooming for boys. Jugs containing Shampoo, Hair-groom and Talc are displayed through cut-outs of a three-stage rocket on the gift box cover. $1.50 plus tax.

Yardley presents, on the left, a two piece set for men, packaged in a trim black and gray striped box, consisting of After Shaving Lotion and Cologne for Men. Retail price is $3.00 plus tax. To the right, the Bond Street set has a new look for Christmas. A shimmering golden container with bright red cap was designed for the Bond Street Spray Mist atomizer dispenser and the companion piece, talc powder, sports a new shaker in bright red, blue and white. The pair is set against a red background. The Yardley English Lavender Christmas Trio is featured in a blue and gold box and consists of three tablets of guest-size soap, talc powder, and after bath freshener. $2.75 plus tax. The Christmas Quartet for men presents Shaving Foam in its prize-winning aerosol container, Invisible Talc, After Shaving Lotion, and Cologne for Men in a black and gray striped gift box, priced at $5.85 plus tax.

Christmas Packaging

From the left, Charles of the Ritz Directoire scented accessories for the bath, wrapped in cerise and gold foil and topped with frothy feathers, Floreal (a cross between eau de cologne and toilet water) and Dusting Powder. Beside them a soap drum with two cakes of french milled soap inside a miniature tasseled drum. To the right, three compacts: a round golden basketweave compact at $8.75, a black enameled set with matching compact and lipstick for $6.50, and a tortoise shell design compact for $2.00. All plus tax. Next, Directoire deluxe dusting powder. Under its gold satin lid with Napoleonic bee design is a large swansdown puff. 11 oz., $5.00. The urn-shaped bottle filled with French Directoire perfume is gift boxed in a graceful gold column. On the far right, Ishah scented accessories include a 6 ounce box of dusting powder, a dram of perfume in a miniature tambourine with tinkling bells, and toilet water. All dressed in gold and white striped holiday wraps banded with ribbons of cerise and green embossed foil.



From left to right, Prince Matchabelli's Cologne Threesome. Three crown bottles, Wind Song, Stradivari, and Beloved, and individually mounted on a circlet of gold and framed with a sunburst of gold glitter. With a transparent cover. $3.00 plus tax. Next the Cologne and Purse Dispenser Set with a see-through hexagonal box, tied with a gold-edged white satin bow. $3.50 plus tax. To the right, Stradivari Sequence. Three crowns nested in pink net on a pink-and-gold platform, visible through a transparent box cover tied with pink and gold-threaded ribbon. The miniature crown holds perfume while the larger crowns hold cologne and creme sachet. The set is also available in Wind Song, with a color scheme of seafoam green and gold. On the extreme right is Cologne Carousel. Underneath a tall white cylindrical cover topped with red suede and gold-edged ribbon bows are four one-ounce sceptre-shaped bottles of cologne, Wind Song, Stradivari, Beloved, and Added Attraction. Priced at $5.00.

From Bourjois, the traditional Evening in Paris preparations come individually gift boxed in silver, blue, cerise and white decorated with a motif of snowflakes and Christmas balls. On the left, gift set 9448 containing Cologne, Cologne Stick, Eau de Toilette, Perfume, Purse Perfume Flacon, Solid Perfume, Liquid Sachet Perfume, Talcum Powder and Face Powder, priced at $15.00. To the right, Roman Holiday Perfusion (Spray Mist), 3 oz., $3.00. Evening in Paris set 9478 contains Cologne, Cologne Stick, Perfume, Purse Perfume Flacon, Solid Perfume, Eau de Toilette, Talcum Powder, Lipstick and Vanity and retails at $25.00. Evening in Paris Perfusion (Spray Mist) retails at $2.00 and on the far right, Roman Holiday Perfume, 1/3 oz., at $5.00. All plus tax.

Emulsifiers

For ease of use—For dependable results—
For solving difficult problems

Tegacid...

Glyceryl Monostearate—Acid Emulsifying. For anti-perspirant—deodorant creams, lotions and ointments—all greaseless, medicated formulations.

Tegin...

Glyceryl Monostearate—Self Emulsifying. For neutral greaseless creams, lotions, ointments, suntan creams.

Tegin 515...

Glyceryl Monostearate—Non Self-Emulsifying. Used in conjunction with auxiliary emulsifiers.

Tegin P...

Propylene Glycol Monostearate—Self Emulsifying. For greaseless creams—brushless shave, foundation, suntan: lotions—foundation, suntan, ointments.

Lanolin Absorption Bases

PROTEGIN X.....ISO-LAN

For Creams, Lotions, and Ointments

• TEGOSEPT PRESERVATIVES ESTERS OF PARAHYDROXYBENZOIC ACID **• ANTIOXIDANTS** PROPYL GALLATE ETHYL GALLATE

Goldschmidt
CHEMICAL CORPORATION

153 Waverly Place, New York 14, N. Y.

SALES REPRESENTATIVES

CHICAGO • LOS ANGELES • ST. LOUIS • MONTREAL • TORONTO

ESTERS FOR INDUSTRY
Since 1921

Questions
for
Cosmetic
Formulators

Are you seeking A cosmetic oil having low odor and color, low viscosity, high stability?

Do you need Emolliency, lubricity, smoothness, spreading and penetrating properties?

Could you use A solvent for lanolin, cholesterol, hexachlorophene, silicone oils, perfumes and sunscreening agents?

The Answer:

KESSLER
ISOPROPYL
ESTERS

MYRISTATE • PALMITATE • STEARATE

Call or write for samples and full information

KESSLER CHEMICALS

KESSLER CHEMICAL CO., Inc.
State Road & Cottman Avenue
PHILADELPHIA 35, PENNA.

New Simplified Method of Handling Coupons to Cut Costs and Speed Retailer Redemption

COUPON MERCHANDISING, a subject of controversy between retailers and manufacturers ever since it was first introduced as a marketing device, has moved a step nearer respectability with the recent establishment of the Nielsen Coupon Clearing House (NCCH), a division of the A. C. Nielson Co.

Retailer Objections

The controversy has revolved around two major points: (1) Time required for redemption and (2) the retailers' handling costs. Resentment on the part of the retailer reached the boiling point last year when Safeway, the second largest supermarket chain in the U. S. announced publicly that they were losing more than a cent apiece on coupons. Henceforth, it was their intention (and many who followed their lead) to consider all coupons common to a given product classification. This meant that one couponer could very well have his coupons applied to a competitor's product.

Coupons are a form of sales promotion by which a manufacturer stimulates sales of his product. In the consumer's eye, coupons represent a saving—a real and tangible saving on products. Because coupons have proved themselves an efficient form of promotion for some product classes and for some individual brands, they are apparently here to stay.

Experience has shown that coupon deals are especially suited to certain market situations. (1) Introducing a new or improved product; (2) Broadening the distribution of a product; (3) As a defensive measure against an aggressive competitor.

Handling Difficulties

Agency account executives, though well aware of the promotional benefits of coupons, have hesitated recommending them to their clients because friction may develop between the maker and the seller. According to a study, published in 1956 by one of the largest retail grocery organizations in the country, objections to coupon promotions are chargeable to *handling difficulties*, not coupon promotions as such. In the study, grocery distributors list their objections to coupons as follows: (1) Coupons varying in size, or torn out of newspaper and magazine ads; (2) lack of a really efficient method of handling coupons; (3) the variation in redemption methods of manufacturers.

The resistance on the part of retailers reached a peak a year or so back, when the grocery trade press carried stories and editorials which indicated that the feeling against coupons was quite prevalent among their readers. Thus an advertising agency, recommending coupon merchandising, stood in a fair way to get its fingers burned in being the indirect cause of disrupting the relationship between their manufacturing client and his vital retail distributors. And yet there remained the undenied promotional power of coupons.

Before the Clearing House was established, a couponing manufacturer was faced with preparing thousands of small checks, costly recruiting of clerical help as his couponing activities increased and receded, and maintaining expensive processing equipment. In the light of the development of the Clearing House, however, account executives are re-examining the possibilities of coupon merchandising.

The Clearing House, with headquarters centrally located in Clinton, Iowa, not only clears up the redemption and handling cost problems, but also offers other benefits. A manufacturer considering couponing can go right ahead with his plans without having to spend time getting familiar with the intricacies of the merchandising device. With the assistance of NCCH advisors, an account executive can make a fairly accurate advance estimate of the percentage of redemption to be expected, by taking such coupon factors as price, how coupon is distributed, type of offer, etc., and relating them to the experience of Nielsen.

How It Works

The Clearing House functions much like a bank. Coupons are "cleared" like checks on a bank clearing house. A coupon deposit slip is filled out by the retailer. He fills in the number of coupons of a specific denomination and makes out an extension, and finally a grand total. The coupons and one copy of the deposit slip are mailed to NCCH, while the retailer retains the other copy. The Clearing House processes the deposit slip and, in about a week, issues one check for all the coupons submitted with each deposit slip. In turn, the manufacturer is billed periodically for all retailer payments made in his behalf and reimburses the Clearing House with a single check in lieu of thousands of checks to individual retailers. The charge for this service, per coupons redeemed, varies according to the size and complexity of the job; but in any case, the total amount of the fee is usually much less than it cost the manufacturer to handle coupons before.

The development of this simplified handling of couponing with a greatly diminished risk of alienating the retailer, once again makes couponing a method for agencies to consider in making their total marketing recommendations to their clients.

The less personal selling of cosmetics on the retail floor and the increasing trend in variety, drug and department stores to adopt self-service makes it imperative that the merchandise itself must function as its own salesman. This implies that self-selection requires advertising that pre-sells the name and product features and prepackaging that enables the purchaser to make her own selection with nothing else to do except to take it over to the cash-wrap desk.

...glamour in glass!

A world of beauty tailored for Milady

Today, every imaginative woman buys her beauty and health aids tailored to her own personality. In gleaming, snowy opal, or crystal flint, H-A *Private Mold* Containers are imagination in glass—and practical, too. At domestic prices, they add the glamorous prestige of more expensive imports to your products. And permanent "Deco-fired" labels can be economically applied at the time of manufacture. *Give your products a very special appeal*—call or write H-A, right now.

HAZEL-ATLAS GLASS division of CONTINENTAL CAN COMPANY

WHEELING, WEST VIRGINIA

The Question of Quality
Has Always Been Answered
by Heiko

HEIKO
TRADE MARK

You can rest assured that the basic materials—Aromatics and Essential Oils—guaranteed by Heine & Co. are superior to all others on the market.

For more than 50 years, perfumers have relied on Heiko Synthetic Flower Oils and Aromatic Specialties and Bases. The special Heiko Process—steadily developed, constantly improved—has always insured the highest excellence. Heiko is a name world-famed. It will bring you unique satisfaction in your perfumes, face powders, face creams, lotions, and colognes.

Heiko products are basic materials. You will see the definite difference when you test them.

Let us send you samples of:

Heiko-Lilac "A"

This indispensable base, with the odor of fresh natural flowers, has a world-wide reputation.

Heiko-Neroli

This perfect artificial substitute for the natural oil will not discolor.

Heiko-Pink

This is one of our oldest products, recommended for all carnation compositions. Its distinctive strength gives it unusual retentive power.

Convallol

Its lily-of-the-valley odor gives compositions an extraordinarily natural and long-lasting perfume.

Your inquiries are wanted and welcomed.

HEINE & Co
601 W. 26th St., New York 1, N. Y.

New PRODUCTS & IDEAS

PLASTIC GRADUATES

Needs Corp. has announced the latest addition to their line of plastic laboratory ware, an exact replica of a glass measuring graduate made of clear, unbreakable, glass-like plastic. According to the manufacturer the plastic is unbreakable under normal use and will not craze and cloud. Markings are in both ounces and metric measure. Reportedly there is no pronounced meniscous. Available in 4, 8, 16 and 32 ounce sizes.

TUBE FILLING MACHINE—1

A new, automatic high speed tube-filling machine is being introduced by Arenco Machine Co., Inc. Known as Type GAN, the machine features automatic registration of tubes and an improved feed system. Among the advantages claimed for the new machine are the automatic feeding of tubes to tube holders from slanting channels, a special appliance effectively facilitating transfer of tubes from cartons to channels. Adaptions are available permitting the GAN to handle plastic tubes. Tubes may be discharged to meet any method of packing, including a special arrangement for feeding tubes directly into cartoning machines.

AIR-POWERED PUMP

The Gray Co., Inc. has designed a new, lightweight, air-powered pump for liquids and semi-fluids to be pumped from original shipping containers in minute quantities or volume delivery, reportedly assuring contamination free supply direct to point of use. According to the manufacturer, the stainless steel lower assembly is quickly and easily removed, without use of tools, from the power head for complete cleaning.

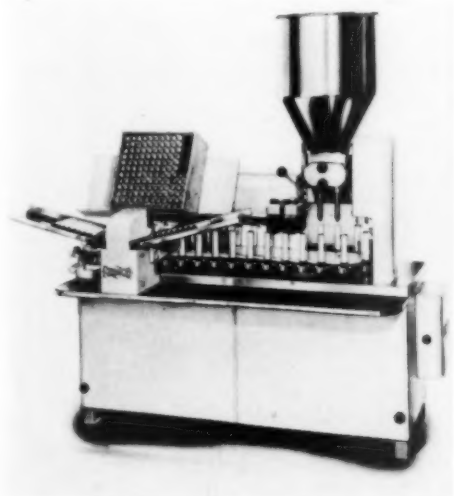
CONICAL DRYERS—2

What are reportedly the two largest conical vacuum dryers ever constructed have been manufactured by Paul O. Abbe Inc. Each dryer has a diameter inside the drying chamber of 10 feet and a total internal volume of 500 cu. ft. The construction is of stainless steel. As the dryers rotate, a heating fluid circulates through the fiberglass-insulated jackets which surround the drying chambers. Each unit is driven by a 40 HP motoreducer, with a magnetic brake to permit accurate positioning of the Rota-Cone for loading and discharging the batch.

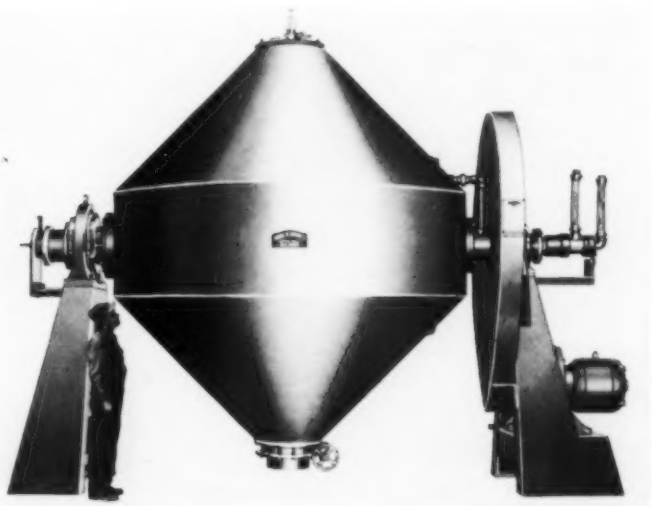
WASTE MOBILE

The Waste Mobile is a four or six bushel bag suspended from a lightweight steel tube frame on full swivel three-inch rubber casters. Walton-March innovations include a welded 10-gauge vinyl plastic bag specially suited for wet waste, self-locking steel brackets to prevent frame collapse during use, nylon washers at pivot points, and six two-way hooks that support both the bag and cleaning accessories.

1.



2.



Chemical Abstracts

continued

PRODUCTION OF SALVIA SCLAREA OIL IN BULGARIA. E. Dimitrova, St. Ilieva, and G. D. Zolotovich. Comp. rend. acad. bulgare sci. *8*, No. 3, 13-16(1955).—The relation of blossom development, also the relation between time of gathering blossoms and yield of oil was investigated. Max. yield is 0.2% by wt. of the freshly gathered blossoms obtained during the beginning of seed ripening. The best time for gathering, depending on the location, is usually 7-9 in the mornings and after 7 P.M. The quality of oil was judged by the % of linalyl acetate. The amt. of linalyl acetate 40-63% in oil paralleled the yield. Thru C.A. *51*, 15070f

WATER SOLUBLE CELLULOSE DERIVATIVES, FACTORS AFFECTING THE VISCOSITY OF AQUEOUS DISPERSIONS. Part II, By R. E. M. Davies and J. M. Rowson, Museum of the Pharm. Society of Gt. Britain, (J. Pharm & Pharmacol., *10*, p. 30, 1958). A study has been made of the effects of salts, alcohol and surface active agents, of contamination by microorganisms and of storage at various temperatures on the viscosities of aqueous dispersions of methyl-, methylethyl-, and sodium carboxymethylcellulose. Small concentrations of salts decreased the viscosity of sodium carboxymethylcellulose sols but had no effect on methyl- and methylethylcellulose sols. Larger amounts caused the viscosities of methyl- and methylethylcellulose sols to increase. Industrial methylated spirit, propylene glycol and glycerol increased the viscosities of all dispersions. The effect of sodium lauryl sulphate on sodium carboxymethylcellulose sols was similar to that of salts, and cetrimide precipitated the derivative. Methyl- and methylethylcellulose dispersions increased and then decreased in viscosity with increasing concentrations of sodium lauryl sulphate; cetrimide increased the viscosity. All derivatives were degraded by microorganisms. The viscosity of preserved dispersions of methyl- and methyethylcellulose altered little over a year. The greatest decreases occurred in the highest viscosity grade samples stored at the highest temperature (30°). All dispersions of sodium carboxymethylcellulose decreased in viscosity over the storage period; storage in light producing the most unstable sols. The pH change of any dispersion on storage was negligible.

INFLUENCE OF DODECANOL POLYOXYETHYLENE ON THE ANTIBACTERIAL ACTION OF HEXACHLOROPHENE. M. Schoog (Univ. Cologne, Ger.). Arzneimittel-Forsch. *7*, 400-2(19573.—The antibacterial effect of hexachlorophene on *Micrococcus pyogenes var. aureus* and *Escherichia coli* was studied in a Warburg app. in presence of Tween 80 (I) and dodecanol polyoxyethlene (II). I suppresses the antibacterial effect, II suppresses it in concns. down to 10^{-4} but has a synergistic effect at lower concentrations. Thru C.A. *51*, 16720g

DYNAMIC EQUILIBRIUM OF SULFUR IN SKIN AND HAIR OF RATS. A STUDY MADE WITH SULFUR-35 ADMINISTERED AS SULFATE. Maria D. Astudillo, F. Sanz, B. Sanz, and A. Valdecantos (Inst. recherches veterinaries, Madrid). Bull. soc. chim. biol. *39*, 569-76(1957); cf. C.A. *50*, 17055d.—$Na_2S^{35}O_4$ was injected subcutaneously in rats and the fate of the S^{35} studied in the next 20 days. Some S^{35} was reduced and fixed in the cysteine-crystine and other compds. of the skin and hair. Quant. data are given in several tables. Thru C.A. *51*, 16777a

EXPERIMENTS ON PERSPIRATION. XII. THE EFFECT OF ALUMINUM CHLORIDE ON THE SUDORAL SECRETION, ON THE FUNCTION OF AGE, AND ON THE SEBACEOUS LAYER ("ACANTHOGENIC" AND "KERATOGENIC" EFFECTS). R. Brun and N. Hunziker. Dermatologia, *114*, 177-82 (1957); cf. C.A. *49*, 16217f.—The sebaceous layer on the under arm of young subjects of 20-30 years protects them against the action of an aq. soln. of $AlCl_3$. In persons of 40-60 years, this protection is no longer effective. In persons of 60 years, the secretion of sweat is no longer influenced by solns. of $AlCl_3$. $AlCl_3$ and $Al(NO_3)_3$ solns. produced in guinea pigs an acanthosis with severe hyperkeratosis. $Al_2(SO_4)_3$ solns. are not active in this respect. $AlCl_3$ and $Al(NO_3)_3$ solns. inhibit sweat secretion in humans while $Al_2(SO_4)_3$ is not active. Thru C.A. *51*, 16914d

ASTRINGENT EFFECT OF SALTS OF HEAVY METALS. S. K. Bhattacharya, W. Heubner, and M. Kramer (Freie Univ., Berlin). Arch. exptl. Pathol. Pharmakol. *225*, 512-21(1955).—The effects of astringent compds. on the elasticity of the frog lung and corneal adsorption of such compds. were detd. The intensity of the astringent action on the lung corresponded generally with the binding capacity to cornea tissue. Tannin, Zn, and Cd were equally adsorbed by cornea tissue, but their intensity of action on the lungs had the ratio 190:10:1. Zn has no different characteristics than other metals. Thru C.A. *51*, 16928c

DYNAMICS OF ESSENTIAL OIL IN ROSE FLOWERS DURING 24-HOUR PERIOD. V. M. Staikov and G. D. Zolotovich. Compt, rend. acad. bulgare sci. *8*, No. 3, 45-8(1955).—The highest oil yield is obtained from 5:30 and 7 o'clock in the morning. At 12 noon, it decreases by 30-40%. At 10 o'clock in the evening, it is about 33% of the morning yield. During the night a slow increase takes place, and at 4 A.M. it is 15-30% lower than at 7 A.M. Best quality oil is obtained when the yield is highest, owing to the greater proportion of eleoptene which is more volatile than the other major component stearoptene. The temp. during the day causes shifts of the highest yield time for gathering allowing a longer gathering period on cool days. The amt. of rose flowers necessary to produce one kg. of oil varies from 3030 kg. at 5:30 A.M. to 7128 kg. at 10 P.M. Thru C.A. *51*, 15070b

INTERRELATION BETWEEN ROSE GROWTH AND ITS ATTAR CONTENT. V. M. Staikov and G. D. Zolotovich. Compt. rend. acad. bulgare sci. *8*, No. 3, 41-4 (1955).—The development of the rose blossom from a bud to a completely opened flower with brown stamens is divided into 6 phases. The most important phase for best yield and quality is phase 5 when all petals are opened and the stamens are still pale yellow. Phase 5 is most abundant between 5 and 9 A.M. The quality of oil is judged by its solidification point which is lowest at max. yield. The f.p. depends on the proportion of eleoptene and stearoptene contained in the oil. High proportion of eleoptene towers the f.p. to about 22° in the range for the best grades of oil. Thru C.A. *51*, 15070d

Exploring the Secrets of Nature

Applying new scientific knowledge to develop synthetic aromatics hitherto unknown
Re-creating, synthetically, precious natural distillates and extracts
*These are problems successfully mastered * by our research chemists and perfumers.*
Experiences thus gained inspire to further DRAGOCO ACHIEVEMENTS

* **BULGARYOL** synthetic Bulgarian rose oil
NEROLYOL synthetic Neroli oil big. pet.
BIGARADIA perfect reproduction of «Absolu de Fleurs d'Oranger»

DRAGOCO INC. NEW YORK

250 WEST BROADWAY, NEW YORK 13, N. Y. · TEL. CAnal 6—5813/15

GRANULOMATOUS REACTIONS TO DEODORANT STICKS. Charles Sheard, Jr., Frank E. Cormia, Samuel C. Atkinson and Edward L. Worthington (New York Hosp., New York, N. Y.). J. Am. Med. Assoc. *164*, 1085-7 (1957).—Cutaneous lesions in the axilla of 3 patients who used a deodorant stick contg. Na zirconium lactate are described. Thru C. A. *51*, 14974b

ESSENTIAL OIL CONTENT OF ROSES. V. M. Staikov and G. D. Zolotovich. Compt. rend. acad. bulgare sci. *8*, No. 3, 21-4 (1955).—The yield of essential oil from *Rosa damascena* in relation to atm. conditions was investigated. The most important factor is the temp. in the morning during which the flowers are gathered. Cloudiness decreases the yield. No relation between the relative humidity and the yield exists. Flowers at the same development stage give const. yield. Thru C.A. *51*, 15070e

THE INFLUENCE OF VITAMIN A ON THE EPIDERMIS. Howard A. Bern, Joel J. Elias, Patricia B. Pickett, Thomas R. Powers, and Mary Nishi Harkners (Univ. of California, Berkeley). Am. J. Anat. *96*, 419-47 (1955); cf. C.A. *45*, 6269e.— The epidermis of male rats treated topically or subcutaneously with vitamin A (I) in sesame oil for 10, 20, 30 and 60 days was compared with that of sesame oil-treated and untreated controls. Acanthosis occurred after topical application of I at each interval studied; no adaptation to the effects was seen. Subcutaneously administered I had no effect on the overlying epidermis. Some cytological changes were seen accompanying the hyperplasia induced by I . . . Thru C. A. *51*, 15004c

ANALYTICAL RESEARCH ON NAIL POLISH. Rossana Ventura (Univ. Pisa, Italy). Minerva medicolegale e arch. antropol, creminale *77*, 12-17 (1957).—The following data are tabulated for 26 com. standards of nail enamels: color in sun and Wood's light of the smear on a transparent celluloid plate, soly. in EtOH, AmOH, BuOH, benzene, $CHCl_3$, Et_2O, petr. ether, CCl_4, xylene, pyridine, and acetone, with exam. (color) of the complete or incomplete soln. in sun and Wood's light. It is concluded that the above data are enough for the identification of the polish. Thru C. A. *51*, 15069b

EXTRACT HAVING FIXATIVE PROPERTIES. K. A. Guseva, R. Ya. Rafanova, and M. T. Kuznetsov. U.S.S.R. 105,543, May 25, 1957. The waste from steam distn. of lavender is used as raw material for extn. of a fixative substance. Thru C. A. *51*, 15076e

REVOLUTIONARY DENTIFRICE.—Irwin and Leaver, of the Otago Dental School, have tested a tetradecylamine acetate toothpaste that they hope will protect dental surfaces. New Zealand's inhabitants have the highest incidence of dental caries in the world. The dentifrice will enter its most spectacular stage of testing next year when researchers in Wellington conduct a large-scale clinical trial. The tooth paste is not complementary to or a substitute for fluoridation. Some aspects which are not yet completely known are how long the protective film remains on the tooth and how many surfaces are reached by the protective agency. This toothpaste was first envisaged after some laboratory tests by Prof. J. P. Walsh 20 years ago and perfected with the aid of Drs. Irwin and Leaver. In some preliminary tests with the free amine, insoluble in water, the test showed a protection averaging 44% efficiency. An abrasive has been added to the originally chalk-free cleanser, and the manufacturers have used the acetate rather than the free amine as the protective agent. In vitro tests with the product have given almost complete protection from a buffer solution of lactic acid (pH 4) for 24 hours. It is believed that the acetate, added not because of its more favorable properties but because of its ease of combination in a chalky base, will be even more successful than the original product, since its solubility may insure greater covering of dental surfaces. The paste, dissolved in the saliva, reaches more surfaces and has an effect as good as that of the oil emulsion of the free amine compound. Thru J.A.M.A. Oct. 26, 1957, 1072p

PROTECTION OF TOILET SOAP AGAINST DARKENING. S. A. Moldavskaya, E. S. Dmitrieva, G. A. Borodina and L. M. Donetskaya (Factory "Svoboda," Moscow). Masloboino-Zhirovaya Prom *23* (3), 22-5 (1957). Toilet soap made of lard and beef-tallow developed dark spots over the surface area during storage when contaminated with metal particles from the die or manufacturing machinery, whereas soap, made from 75% hydrogenated fat soap stock, did not develop dark spots in storage. Spot development was not retarded by 2-5% rosin, and was enhanced by 1% of a deodorant compound. Spot formation was inhibited by the addition of 0.1% of water glass to soap after the graining operation. Inhibition of oxidative deterioration in soap during storage prevented spotting around metal nucleuses, especially that deposited on the surface of the soap from bronze. (C.A. *51*, 10096). Thru J. Am. Oil Chemists Soc. *34*, 484.

PRINCIPLES FOR EVALUATION OF THE SAFETY OF COSMETICS FROM THE STANDPOINT OF INHALATION

Henry J. Horn, M.D.

This paper presents a brief outline of the pulmonary anatomy, and shows how the lung is specifically designed for rapid diffusion of gasses from the lung to the blood and vice versa. It is pointed out that the total surface area of the lung is approximately 25 times greater than the surface area of the skin.

Potentially toxic chemicals in the atmosphere may be either in the form of a vapor or an aerosol. Synonyms for aerosol are smoke, fog, mist, and dust. An aerosol consists of particles whose size is less than 50 microns in diameter, although those which most readily enter and settle in the lung are 0.3 to 1.2 microns in diameter. Since the absorption of the chemical from the lung depends upon many factors, it has become the practice in inhalation toxicology to speak only of the concentration of the chemical in the air. To determine actual dosage would require a knowledge of the concentration in the atmosphere, the rate of absorption by the lung, length of exposure, and the rate of absorption by the lung, length of exposure, and the rate of respiration (minute volume).

The methodology of conducting inhalation toxicology experiments is outlined. In conducting inhalation experiments on animals, it becomes necessary to define whether acute, subacute, or chronic exposures are necessary to adequately identify the inhalation hazards. Furthermore, the selection of various animals is discussed from the standpoint of their utility for studying various chemicals.

Finally, the extrapolation of animal data to human toxicology is required. Every effort is made to estimate the safe maximum allowable concentration (M.A.C.) from the animal data. This requires the evaluation of the chemical from long-term exposures with animals plus the incorporation of a suitable safety factor. Brief mention is also made of the special problem of handling particles which penetrate into the deep portion of the lungs.—*Abstract of SCC paper.*

For Finer Fragrance . . .
Greater Dermatological Safety

CHEMODERMS *by* **FIRMENICH**

Seven years of original research have been rewarded by the discovery and development of a new group of controlled and reproducible perfume compositions for cosmetic and pharmaceutical products. We call them CHEMODERMS, for their chemical purity and dermatological safety. Exhaustive tests prove them free of primary irritants. Leaders in the treatment of allergies hail them as an important step in the elimination of sensitivity to perfumes. Now available in ten of the most desirable, panel-accepted fragrances. CHEMODERMS will enhance your next cosmetic creation, enlarge your markets, and enliven your presentations and promotions with vital and timely appeals.

FIRMENICH INCORPORATED

FIRMENICH & CIE
SUCCESSEURS DE
CHUIT, NAEF & CIE
GENEVE SUISSE

250 WEST 18TH STREET, NEW YORK 11
FIRMENICH OF CANADA, LIMITED,
348 WALLACE AVENUE, TORONTO
CHICAGO OFFICE: 612 NORTH MICHIGAN AVENUE
LOS ANGELES, 1726 MALCOLM AVENUE
GENEVA · PARIS · LONDON

A stock bottle CAN make a distinctive package.
You can prove this to yourself by making
a selection from the extensive Carr-Lowrey
line and letting us decorate it with
your own design. The round bottles
illustrated are our 440, 337
and L-33 styles.
SKIN
FRESHENER
337
CL 440
Lanolin
Shampoo
L33
Cologne
4 FLUID OZ
GLASS
STIMULATES
SALES
CARR-LOWREY
GLASS CO.
Designers and manufacturers of fine glass containers
Factory and Main Office: BALTIMORE 3, MD. • New York Office: 415 MADISON AVE. • Chicago Office: 1572 MERCHANDISE MART

News and Events

B. T. Babbitt Inc. Plans to Triple Business in Five Years

B. T. Babbitt Inc., New York, through long range planning plans to triple its business in the next five years attaining a gross of over $60,000,000. This was made known in a prediction by President Marshall Lachner to the New York Society of Security Analysts.

A substantial part of the gains will come from new products through the acquisition of other companies. Two such companies are now being seriously considered. The company also plans to launch a line of radically new and different insecticides. Costly deals at no profit are being eliminated as the company is no longer "buying volume at the cost of profits."

Aerosol Techniques, Inc. Completes Expansion Program

Completion of a program of expansion and relocation of the executive headquarters and research-development laboratories of Aerosol Techniques, Inc., in Bridgeport, Conn., was announced recently by H. R. Shepherd, President.

With the new additions, bringing its main operational area to 90,000 square feet, ATI will make available to its customers the most extensive aerosol laboratory facilities in the world, including a completely integrated pilot plant.

Mr. Shepherd also announced another noteworthy advance for his company, the construction of a new aerosol pharmaceutical manufacturing division specializing in the production of inhalation therapy aerosols, pressurized vitamins, antibiotics, steroids and allied products for the drug field.

ATI's technical department is headed by Sam Prussin, director of new products and sales development, and Mr. Presant as director of research and development. The other key people are Sidney Sobel, pharmacist and pharmaceutical chemist; Philip Kleppe Jr., cosmetics and specialties; Carmelo Carrion Jr., pharmaceuticals; Felix B. Bartosik, pharmaceuticals and medicines; Antonia Koeppel, cosmetics; Dorothy Anderko, cosmetics; Vera Zeppler, stability; Dr. Peter Sgaramella, quality control; George Lacovara, specialties; and Emily Matese, assistant to Mr. Presant.

Abe Plough Presents Baby Incubator as Part of 50th Anniversary

Abe Plough, president of Plough, Inc., Memphis, Tenn., presented the Le Bonheur Children's Hospital with its first Isolette September 4 in connection with the company's 50th anniversary. An Isolette is a special air conditioned incubator for premature babies which reduces handling of the infant.

Pierre Coutin Associates Established in New York

Pierre Coutin, twice president of the Essential Oil Assn. of the U. S. A. who resigned as president of Ph. Chaleyer to form his own company under the name of Pierre Coutin Associates is now established in 219 E. 60th St., New York 22, N. Y. Mr. Coutin has had broad experience in the essential oil industry, having been associated with a leading French essential oil house for 27 years before he became president of Ph. Chaleyer Inc.

Dr. Paul Bedoukian Writing Book on Armenian Coinage

Dr. Paul Z. Bedoukian, author of Perfumery Synthetics and Isolates and numerous articles relating to the allied industries in technical journals has returned from a trip to Europe after visiting Paris, Vienna, Venice, Grasse and London. In addition to meeting old friends in the industry. Dr. Bedoukian spent considerable time in various European museums gathering material for his forthcoming book on the coinage of medieval Armenia. In the course of this research, over 5000 impressions of coins of this period were obtained from various museums and private collections, to be incorporated in the corpus of his book.

Dr. Bedoukian is an enthusiastic numismatist, a hobby he has followed for years.

Edward Sagarin Joins Embassy Laboratories

Edward Sagarin, editor of "Cosmetics: Science and Technology" and author of the "Science and Art of Perfumery" as well as numerous technical papers presented before associations has joined the staff of Embassy Laboratories, 2896-98 Fulton St., Brooklyn, N. Y. Mr. Sagarin has had much experience in the trade and was formerly associated for years with Givaudan-Delawanna Inc. and Standard Aromatics Inc. Embassy Laboratories was established by Franklin H. Cooper which has just acquired a new and enlarged plant in Brooklyn. In his new position Mr. Sagarin will supervise sales and customer relations.

AEROSOL MINDS MEET IN BRIDGEPORT

A delegation of Du Pont aerosol experts visits the new laboratories of Aerosol Techniques, Inc., in Bridgeport, Conn., to join ATI chemists in a discussion of technical problems and new developments. Seated is Fred Presant, ATI director of research and development. Standing, left to right: front row, H. R. Shepherd, president of ATI; Du Pont's Charles Wirth III, Dr. Fred Read, Dr. Paul Sanders, Dr. Don Kvalnes and A. H. Lawrence, Jr.; back row, Du Pont's C. Earle Kimble, ATI's James Russo; Du Pont's Dr. Frank Bower, ATI's Sam Prussin and Fred Gardner, and Du Pont's L. P. Hall, Jr.

ARCTANDER TELLS OF AFRICAN SAFARI

At the CIBS Luncheon Meeting, August 7, at Toots Shor's, Professor Steffen Arctander, internationally known chemist, perfumer and author, now associated with the research department, Essential Oil and Perfumery Division of Colgate-Palmolive Co., was the speaker. His topic—"A Safari thru Africa," which highlighted the various trips which he took by car thru Africa visiting essential oil growers, etc. A photographer and lecturer of note—he served as an instructor in high explosives and incendiary bombs, etc., for the British Intelligence Service in Denmark during World War II. Shown after the meeting (l to r) George Kaempkes, Pacquin, Inc., CIBS' Director; Professor Arctander; William Jaeger, Park and Tilford, CIBS' President and Harry Cowperthwaite, T. C. Wheaton Co., Chairman, CIBS' Auditing Committee.

Paul E. Roehrich Returns From European Tour

Paul E. Roehrich, president of Richford Corp. of Oceanside, N.Y., has returned from a five weeks business and pleasure trip in Europe, during which he was accompanied by two of his daughters.

The principal purpose of the trip was to make a study of the European market for possibilities of the sale of Richford closures, spillproof bottles, and other perfume and cosmetic accessories, and to establish representation in Belgium, Holland, Switzerland, Sweden and Germany. Travelling by ship to Le Havre, the Richford party drove through France to the black forest region and continued to Frankfurt/M and then to Brussels for a visit to the World's Fair. After this, Mr. Roehrich met in Hamburg with his Swedish representative after which the party flew home.

Procter & Gamble Forms New Overseas Firm

Procter & Gamble—Marde, in Casablanca, Morocco, is the latest overseas firm formed by Procter & Gamble. The new company is a subsidiary of Procter & Gamble A.G. Luzern of Switzerland.

Japanese Marketing Specialists Visit Shulton

Under the auspices of the State Department, Alfred L. Cardinaux of the International Cooperation Administration is conducting a 6-week good will tour of representative American Industries. His guests are a study team of Japanese Marketing Specialists from private industry in Japan and the University of Tokyo. The morning of August 1 they were the guests of Shulton, Inc., at their Rockefeller Center offices, where Frank Carpenter, vice president, using the highly successful debut of Beauty Ice as a keystone, conducted a session on "Merchandising and Marketing Highly Competitive Products."

DuBarry Launches Three New Royal Jelly Hair Preparations

DuBarry has anounced the introduction of three new hair care preparations formulated with royal jelly. They are Royal Shampoo in a 6 oz. container retailing at $1.50; Royal Creme Rinse also in a 6 oz. container retailing at $1.50 and Royal Hair Conditioner in a 6 oz. container retailing at $2. All will go on sale October 1.

Cosmetic Excise Tax Collections Down for Last Quarter

Cosmetic excise tax collections for the quarter ended June 30, 1958 were $21,-026,000. This was $556,000 less than for the corresponding quarter in 1957.

For the fiscal year 1958 the cosmetic excise tax collections were $98,158,000. For the 1957 year the collections were $92,686,000.

Webster Heads Sister Kenny Foundation Fund Appeal

Fred W. Webster, vice president of Van Ameringen-Haebler Inc. is chairman of the Sister Kenny 1958 fund appeal.

James A. Hatton to Manage New Shulton Subsidiary

The formation of a new subsidiary, Shulton Limitada, which will operate in Argentina has been announced by David Gregg, Jr., vice president of Shulton, Inc.

James A. Hatton

It is anticipated that operations will be established and distribution effected prior to the Christmas selling season. The new subsidiary becomes the seventh to be established by Shulton. James A. Hatton has been named manager of the Argentine branch. He joined Shulton in 1956.

Croda, Inc. Moves to New Offices

Croda, Inc. has announced the lease of new, larger offices. The move became necessary to the increased activity in the demand for the lanolin products and related cosmetic, pharmaceutical and industrial raw materials produced and marketed by the Croda organization. The new offices are at 15 E. 26 St., New York 10, N.Y.

Chesbrough-Pond's Inc. to Consolidate Manufacturing in Connecticut

All manufacturing of Chesebrough-Pond's Inc. is being consolidated in Clinton, Conn. Manufacturing in three other states, consequently, is being discontinued.

Perfumery Associates Inc. to Operate Ph. Chaleyer, Inc.

Perfumery Associates Inc., New York, has taken over the operation and management of Ph. Chaleyer Inc. and will consolidate both offices at 160 East 56th St., New York. The telephone number is PLaza 3-8618-9. The research and development facilities of both concerns will be combined so as to offer more complete service to the trade. The managing officers of the combined enterprise are: Henry Retailliau, president; Thomas Miserendino, vice president; and Robert Luthy, treasurer.

Ph. Chaleyer, Inc. was founded by Philip Chaleyer and operated by him until its sale a few years ago. Perfumery Associates is a well established essential oil house which has been in business in New York for many years.

German SCC Program for International Scientific Session

The following papers were presented at the International Scientific Session of the Society of German Cosmetic Chemists, held in Bonn from September 12 to 15.

Dr. L.-W. Masch, "The Evolution of Cosmetic Chemistry towards Independent Scientific Standing and the National and International Position of the Society of German Cosmetic Chemists"; Dr. H. Freytag, "On the Definition and Problematicals of the Scientific Cosmetics"; Prof. Dr. A. Schöberl and Dr. H. Gräfje, "Bisulfide Exchange Reactions of Low and High Molecular Weight Compounds"; Prof. Dr. A. Schöberl and Dipl.-Chem G. Bauer, "A Novel Type of Cross Linking Reactions of Hair Keratin: Transformations with Bunte Salts"; Dr. H. Freytag, "An Alcohol-Soluble Nitrogen Compound in Human Hair"; S. Preisinger, "Microscopic Studies of Hair Dyeing" (with film); Dr. G. Lietz, "Ideas and Findings concerning Emolliency and Percutaneous Action of Cosmetics"; Dr. O. Jacobi, "What happens with Cosmetic Creams, Lotions and Oils on the Skin?"; Dr. Powers, "The Effect of Emulsions and Creams on the Stratum Corneum"; Dr. J. S. Jellinek, "The physico-chemical Behavior of Perfume Materials in Various Carriers"; Dr. V. Herout, "Prochamazulenes"; Dr. H. K. Thomas, "The Pharmacology of Essential Oils"; Dr. H. C. Friederich, and Dr. Ph. Witjens, "Patch Testing of Perfume Materials on Human Subjects: New Findings"; Dr. R. Brun, "Recent Studies on Perspiration"; Dr. J. Cotte, "Contribution to the Study of some Tissue Extracts"; Dr. P. Rovesti, "The Action of the Cytamines from Protein Hydrolysates on the Skin"; M. G. deNavarre, "The Inactivation of Preservatives by Nonionics"; Dipl. Chem. R. Blanke, "Possibilities of Objective Color Evaluation in Cosmetic Preparations"; Dr. I. Hajdu, "The Hardness Testing of Creams"; Dr. L.-W. Masch and B. Ehring, "Temperatur-Dependant Viscosity Fluctuations of Soap Gels"; Dr. E. Paukner, "The Market Research and Perfuming"; Dr. habil K. Röth, "Mathematical Methods in Cosmetics"; Dr. G. Everts, "On the Glass Tests of the DAB 6 (6th German Pharmacopoea)."

Shulton Announces Old Spice Contest Winners

Announcement of the thirty winners among drug and department stores climaxed the highly successful Old Spice for Men Father's Day Window Display Contest sponsored annually by Shulton, Inc.

The contest, which offered cash awards totaling $6,525 for the most imaginative and original Father's Day window display, was entered by thousands of retailers throughout the country. First prize winners were Anthony Markus, for department stores in cities of over 220,000 population; Herb Krofft, for department stores in smaller cities; and Stanley Bishop for drug stores.

NBBA to Hold Organizational Meeting

The board of directors of the National Beauty and Barber Manufacturers' Assn. will hold an organizational breakfast meeting during the 1958 National Beauty Trades Show, in the Hotel Statler, New York City, on Wednesday morning, October 1.

Aerosol Package Contest Scheduled for December

The Seventh Annual Aerosol Package Contest to select the best aerosol packages of the year will be held in conjunction with the 45th Annual Meeting of the Chemical Specialties Manufacturers Assn. at the Hotel Commodore, New York City, December 8-10. Entries will close October 15, 1958 and are open to any brand owner or marketer without fee. Awards will be made on the basis of general sales appeal in each of eleven groups. In addition a "best package in the show" will be selected. Among the special groups are: Shave products; Hair preparations; Perfumes, colognes and toilet waters; and other personal products, including dentifrices, shampoos, body deodorants, sun tan oil, etc.

Rules and entry blanks may be obtained by writing to the Chemical Specialties Manufacturers Assn. Inc., Aerosol Awards Committee, 50 East 41st Street, New York 17, N.Y.

Food Additive Control Bill Passed by Congress

The food additive control bill has been passed by Congress. While all of its ramifications are not known as yet it will bring about changes in the manufacture and processing of food. The Flavoring Extract Manufacturers Assn. has taken steps to adopt plans and policies to carry into effect the intent and purposes of the law.

It is believed that cosmetic additive legislation will come before Congress at the next session.

Society of Pharmacists To Meet October 9

Walter Fredell

The first Fall meeting of the newly formed Society of Pharmacists in Industry will be held October 9 at the Academy of Science, New York, N.Y. A prominent member of the industry will be guest speaker. President Walter Fredell, Warner-Lambert Research, announces that this will be an open meeting and guests are cordially invited.

Packaging Exhibition to be Held In Amsterdam in April

The 5th Packaging Exhibition, called Europak 1959, a trade fair dealing exclusively with packaging materials and packaging machinery, will be held in Amsterdam from April 21 thru 28. It will combine exhibits originating from 20 different countries and visitors are expected from all parts of the world.

Fritzsche Brothers, Inc. Announces Orange Oil Price Decline

Fritzsche Brothers has announced a price decline for Oil Orange Sweet California Coldpressed to $2.35 per pound and Oil Orange Sweet California Distilled at $.90 per pound.

OLD SPICE WINDOW DISPLAY WINNER

$1,000 First Prize Window—Drug Store Category—in Shulton's Old Spice for Men Father's Day Window Display Contest. Awarded to Stanley Bishop, California Avenue Pharmacy, Palo Alto, Calif.

Dodge & Olcott Celebrates 160th Anniversary

This October, Dodge & Olcott, Inc., New York, N.Y., celebrates its 160th anniversary. Established in 1798, during the administration of John Adams, second president of the U.S., the history of D&O is but a few years shorter than that of the American republic, and the factors affecting the development of one, also played their role with the other. Dodge & Olcott is the oldest company in America specializing in the manufacture and merchandising of essential oils, aromatic chemicals, oleoresins, seasonings, flavor and perfume bases for the food, cosmetic, drug, soap and industrial odorant industries.

The growth of the essential oil industry has been in direct proportion to the vast progress and development of the industries it serves. Medicines, cosmetics and perfumery, originally imported into the young colonies, are now domestically manufactured in tremendous quantity and variety, and the industry that flavors and/or perfumes them has grown accordingly. As for the food industry . . . its technology is growing at such a rate that flavor and seasoning suppliers must keep constant liaison with the processor in order to keep abreast of new requirements. The type of flavoring compound used, for example, in a frozen pie, an aerosol syrup, or seasoning in a precooked, canned stew bears little, if any resemblance, to the products found on the kitchen spice shelf in previous years.

The future of both flavor and fragrance stretches into a limitless horizon as increasing specialization and the importance of new product development continue to supplant the older satisfaction of generalized and simpler desires. Canning, freezing, radiation sterilization, dehydration, dehydro-freezing, aerosol packaging . . . all carry with them further demands upon the flavor chemist. And perfumery is, today, sending its subtle, but telling tendrils into the most amazing variety of industrial products and processes. Not only are cosmetics and handkerchiefs perfumed, soaps and cleansers . . . but sludge sumps and garbage disposals, dust mops and plastic wood, rust preventatives and smoke stacks. All, today, represent vast new challenges to the industrial perfumer. Viewed from the vantage point of 160 years of cumulative experience, the future appears, to the company to be limited only by the vision of the company.

Dow Chemical Announces Fiscal Sales Decline

The Dow Chemical Co. has reported sales of $636,201,143 and earnings after taxes of $46,059,181 for the fiscal year ended May 31. Both figures represented declines from the preceding year when adjusted for the income of The Dobeckmun Co. which became a part of the Dow organization during the year.

Max Factor Hosts Beauty Queens

At the close of the Miss Universe Beauty Pageant, Max Factor, co-sponsor of the event, made arrangements for Miss Universe along with her four runners-up, the Misses Brazil, Hawaii, United States and Poland, as well as Miss Denmark and Miss Holland, to be his guests in Hollywood for a period of ten days.

One of the highlights of Miss Universe's stay in Hollywod was her visit to the world-famous Max Factor Make-Up Studio along with three of her runners-up.

As co-sponsor of the pageant, Max Factor awarded Miss Universe a $3,500 travel contract and $2,500 in cash. This was the top prize of the $15,400 awarded by him to the winner and semi-finalists. Other prizes were $1,500 in cash plus a $1,500 travel contract to the first runner-up; $1,400 to the second runner-up; $1,000 to the third runner-up; $600 to the fourth runner-up; and $100 each to the ten remaining semi-finalists. He also awarded a special cash prize of $1,000 to Miss U.S.A., with runners-up in this division receiving varying amounts.

Embassy Laboratories Get New Enlarged Plant

A new and enlarged plant, with increased capacity for manufacture, is now occupied by Embassy Laboratories, private label cosmetic manufacturers, at 2896-98 Fulton St., Brooklyn, N.Y.

HYACINTH ISOFLOR . . .

Fine, delicate perfume of the flower; adds freshness and distinction to all floral odors.

LILAC ISOFLOR "B" . . .

A perfect duplication of the purple Lilac fragrance.

TUBEROSE ISOFLOR . . .

A remarkably fine synthesis of the heavy, sweet odor of the flower.

160 - 5th Ave., NEW YORK 10, N. Y. • CHELSEA 3-1937

Descollonges INC.

Successor to W. J. Bush & Co., Inc.

R. D. WEBB & CO., INC.

Distillers of essential oils of outstanding quality.
Exclusive American agents for genuine

MYSORE SANDALWOOD OIL

R. D. WEBB & CO., INC.
Main Office: Cos Cob, Conn. Branches: Chicago and Los Angeles

NOW OVER 5100 BIOS CHEMICALS

Including

ALL NEW & RARE
SYNTHETIC & NATURAL
RAW MATERIALS
For Perfumes & Flavors

Ask for our new complete catalogue

BIOS Laboratories, Inc.

17 West 60th St. New York 23, N. Y. Plaza 7-8171

Announcement

PERFUMERY ASSOCIATES, Inc. wishes to notify all of their business friends in the industry that they have taken over the operation and management of Ph. CHALEYER, Inc.

The principal office of the Company will be located at 160 East 56th St., New York 22, N. Y. Telephone: PLaza 3-8618-9.

The managing officers are as follows:

President - Henry Retailliau
Vice President - Thomas Miserendino
Treasurer - Robert Luthy

The research and development facilities of both organizations have been combined to create and give the best quality and service to the trade.

Scovill Producing New Mascara Applicator

The Scovill Manufacturing Co. has announced that a new Mascara Applicator is now available to the cosmetic industry. The applicator is of double end construction. The cap and body are polished, anodized and dyed aluminum with a polished and lacquered golden band in the center. The body contains the applicator, and the cap contains a small comb. Both applicator and comb are made of polypropylene.

Breck Completes Hair Care Survey

John H. Breck Inc., recently completed tabulations for its eleventh annual survey of beauty shop attendance, the only comprehensive work of its kind in the hair care preparations field. Results of the survey, in line with those of past years, indicate that over 80% of all women have one or more hair problems and that these problems in order of importance are manageability, hair dryness and dandruff.

Survey tabulations also indicated that during the latter part of 1957 there was a slight rise in the use of hair coloring by women interviewed.

Morningtar-Paisley Reports Higher First Half 1958 Earnings

Morningstar-Paisley, Inc. consolidated sales for the first half of 1958 amounted to $10,737,936, compared with $9,728,-767 for the same period a year ago. Earnings during the second quarter were 18% above the first quarter of 1958.

Teen-Age Girls Start Wearing Lipstick at Age of 14

Lipstick is worn by 99.8% of teen age American girls with 92.6% of them wearing it by the age of fourteen according to a report of Seventeen Magazine. Seventeen Magazine recently published a survey of trends in "The Beauty Habits and Product Preferences of Young Women Under Twenty, Part 2, in a continuing semi-annual series of surveys designed to keep abreast of current teen trends in cosmetic purchases.

SCREW on TOP
for GLASS and METAL
AEROSOL CONTAINERS
Used to make refillable glass and metal Aerosol Containers
Will fit coated and uncoated bottles. If you have a special bottle send a sample to make sure of fit.
FULL LINE of LAB EQUIPMENT
BUILDERS' supplies complete laboratory set-ups, including laboratory pressure fillers, drill press capping machines, liquid transfer apparatus, can piercing pressure testing apparatus, constant temperature water baths, dry ice coolers, cabinets, formica top tables, tanks and tank racks, etc.
WRITE FOR FREE ILLUSTRATED LITERATURE
BUILDERS SHEET METAL WORKS, Inc.
108 WOOSTER STREET NEW YORK 12, N. Y.
CAnal 6-5398

Kessler Chemical Doubles Production Facilities

Kessler Chemical Co., Inc., is now in production in its second manufacturing plant at Cottman Ave. and State Road, Philadelphia, according to Dr. W. B. Pings, general manager.

Ar-Ex Appoints Three District Sales Managers

J. B. Kahn, president of Ar-Ex Products Co., Chicago, manufacturers of hypo-allergenic cosmetics, announces the appointments of three District Sales Managers.

David Barndt, who has been covering the northwestern coast states for Ar-Ex for five years, has been appointed western sales manager—to be responsible for Ar-Ex sales in 11 western states. Frank LiPuma, who has for the past ten years been in charge of Professional Service in the Chicago area, has been appointed midwestern sales manager, and Robert Olfson, who for the past twelve years has been representing Ar-Ex in New England, has been appointed eastern sales manager.

Lehn and Fink Promotes Three in Sales Positions

Three promotions in the Toiletries and Proprietaries Division, Lehn and Fink Products Corp. have been announced by Emanuel Goren, division manager. Ray Mitchell will be East Central regional manager, replacing Charles F. Manz, recently promoted to sales manager of the company's Professional Division. Mr. Mitchell had been a sales representative.

Also moving up to regional sales manager is retail sales supervisor Donald G. Anderson, who fills the Central region post vacated when Randal Mathews became assistant brand manager in the firm's New York office.

Two Sales Representatives Join Chanel

Chanel has announced recently that they have retained the services of two representatives, Ernst Boles of Los Angeles, and Richard M. Drach of San Francisco to replace the late Charles Collins in California and adjacent states. This important territory, comprising California, Nevada and Arizona, will be divided. Mr. Boles will cover Southern California, Arizona and the Southern Nevada area while Mr. Drach will cover Northern California and Northern Nevada, as well as Hawaii.

Commerce Department Announces Technical Information Center

A Foreign Technical Information Center is now operating in the U. S. Department of Commerce to provide American science and industry with access to translations of a large amount of Soviet technical information. Much of the material collected by the Office of Technical Services will be from Government sources, principally intelligence agencies.

Dodge & Olcott Moves Philadelphia Office

As of September 1, 1958, the Dodge & Olcott, Inc., Philadelphia Sales Office, under the direction of Matthew J. Phelan, has been located in the 69th Street Theater Building, Garrett Road and Westchester Pike, Upper Darby, Pa. For more than 40 years the D&O Philadelphia branch office had been maintained in the Arch Street building. This building has been condemned to make room for the new Independence Mall now under construction.

Elizabeth Arden Aids Debs at Versailles Ball

The forty-eight debutantes from the United States attending the Versailles Ball in Paris last summer received special assistance for the occasion from Elizabeth Arden. They received new make-ups and coiffures in Miss Arden's Paris Salon, 7 Place Vendome. Upon their arrival in Paris the girls were met at the airport by Madame Gladys de Maublanc, Directoress of Elizabeth Arden, Paris, and sister of Miss Arden, as well as by members of the Organizing Committee for the ball. Each girl received an Elizabeth Arden "Maquillage Versailles" case designed for the event and an invitation to the Salon.

Walter Mueller Retires From Van Dyk & Co.

Walter Mueller, one of the best known men in the essential oil and aromatic chemical industry has retired from Van Dyk & Co. with which he was associated for many years. Prior to joining Van Dyk & Co. Mr. Mueller was secretary of Morana Inc. the largest company in the raw material field in the early twenties.

Dr. T. Higuchi Speaks Before Chicago SCC

Dr. T. Higuchi, Professor in the School of Pharmacy of the University of Wisconsin, presented a timely and significant paper entitled "Thermodynamics, Complexing and Skin Penetration," in which various factors governing the rate of skin penetration by chemical agents were considered from the chemical viewpoint. The two currently debated mechanisms of penetration were discussed briefly at the beginning, to establish a proper background for consideration of the relative importance of activity coefficients, diffusivity, viscosity, melting point, etc.

His address took place before the September Meeting of the Chicago Chapter of the Society of Cosmetic Chemists on September 9, in Chicago.

Fans Pick Star in Mennen Football Promotion

The greatest number of fans to ever participate in a major sports selection—30,000,000—were given the opportunity to vote for the Mennen Football Fan's Star trophy, given to the outstanding college or pro player in the Chicago Tribune's 25th annual All Star Football classic on August 15. The contest was televised over 160 markets across the country. The player receiving the highest number of votes will be honored at a national press banquet in New York, where he will be awarded the 30 inch silver trophy.

Seminar on Point of Sale Merchandising

The New York University Management Institute and the Point-of-Purchase Advertising Institute will hold a seminar on point of sale merchandising Sept. 25 to Nov. 20. It will be the first of its kind ever held by an American university. William W. Mee will be the moderator. In view of the increase in self-service selling a large attendance is expected.

Babbitt's "Buy Three—Ride Free" Subway Promotion Paying Off

When the Transit Authority of New York in an effort to bolster its sagging revenues entered into an agreement with B. T. Babbitt Inc. to accept three coupons attached to five of Babbitt's detergent products in exchange for a subway token or for a ride on any of the Transit Authority's buses, much speculation resulted as to the success from a mutual standpoint of the plan. It went into effect July 1. B. T. Babbitt redeems the coupons collected by the bus drivers and the subway at five cents each so that the Transit Authority loses nothing.

At the end of two months President Marshall S. Lachner of B. T. Babbitt Inc. reported on the progress of the promotion from his company's standpoint as follows:

"In New York, the biggest market in the nation, it moved the entire line of Babbitt products onto some shelves we had not been on in a decade. . . . To get an item back on the shelves after having been off for considerable time, takes promotional magic. That's why the subway promotion was so important."

Coupon redemptions are at the rate of 12,000 per week and "may well run as high as 40,000 a week before the year's out," he said. Normally, coupon promotions are costly but this one is basically low cost, he maintained.

van Ameringen-Haebler Announce New Cream Base Material

The availability of experimental quantities of a new cream base material which appears to be effective in transferring active medicinal and cosmetic agents through the skin tissue has recently been anounced by van Ameringen-Haebler, Inc.

According to the firm, Transdermine, the trade-marked name for this lecithin-like synthetic material, contains all of the major chemical entities present in natural lecithin. It occurs as an ivory white wax-like solid which can easily be converted into an emulsified cream.

The company stated that extensive animal studies for primary irritancy and sensitivity revealed no significant adverse responses.

T. G. A. Issues Six Excellent Educational Booklets

Six educational booklets covering the entire field of toilet preparations have been prepared by and published by the Toilet Goods Assn. which are destined to produce worthwhile results. The booklets were designed for young men and women of high school and college age for the purpose of acquainting them with the industry and its products. Naturally they are not intended to be technical treatises either on manufacturing or marketing.

A booklet is devoted to each of the following: Hair, Grooming, Fragrance, Manicure, Treatment and Make-up. The history, use, manufacture, marketing, and other aspects are covered by the following authors: Jill Jessee; Myra D. Conklin, Harold Goulden, S. L. Mayham, Enid Edson and E. C. Lavorata. Suggested relevant reading is given in a page of references in each booklet. The text is clearly written in an interesting way.

Procter & Gamble Co. Establishes New Trade Relations Division

A new Trade Relations Division has been established by the Procter & Gamble Co. to assist its various sales organizations and other departments in maintaining good relationships with distributors, retailers and industrial users with whom the company deals.

Paul R. Parrette has been appointed manager of the new division. He has been associated with the company for 32 years and recently has been president and general manager of the company's Philippine subsidiary and in the past two years has been setting up the organization of Procter & Gamble Belge, which manufactures the company's products in Belgium, Holland and Luxembourg. The company's progress in developing new products, its diversification into new marketing fields and its increased number of sales representatives made the establishment of the new division a logical move according to Mr. Parrette.

Seventeen Magazine Enrolls 93 Stores in Its Beauty Course

Seventeen Magazine, New York, reports that 93 stores have enrolled in its 1958 Beauty Workshop Course more than double the number of 1957 when the program was initiated.

Designed to promote teen age traffic and build teen loyalty for the cooperating stores the semiannual Workshop offers teen age girls a 10-session course in beauty and grooming. It is offered to stores on a six months exclusive-in-your-city franchise basis. Stores are supplied with complete information on how to conduct the course. The nucleus of the course is a booklet on grooming and beauty prepared by the magazine. Certificates of graduation are given to each girl completing the course.

Saturated Deodorant and Other Cosmetic Pads Now Taxable

Fabric pads for deodorants and other cosmetic purposes must pay the 10% excise tax effective October 1.

Dr. S. I. Kreps of Van Dyk & Co. Lectures on Sunscreen Compounds

A large gathering of cosmetic chemists in the metropolitan area listened attentively to an interesting and informative lecture on sunscreen compounds by Dr. S. I. Kreps, technical director of Van Dyk & Co. at the first Autumn meeting of the New York Chapter of the Society of Cosmetic Chemists, September 3.

In addition to being technical director of Van Dyk & Co. Dr. Kreps is associate professor of chemical engineering at the Newark College of Engineering. The lecture which was illustrated covered physical and chemical requirements of compounds useful for sunscreens in cosmetics, the nature of the interaction between radiant energy and the chemical system, energy requirements and chemical structures.

At the conclusion of the lecture a question and answer period amplified some of the significant points brought out by Dr. Kreps.

Harry Isacoff, chairman of the Section presided at the meeting with his usual skill.

Vick Chemical Co. Acquires Lavoris Co. by Stock Exchange

The Vick Chemical Co., New York, N. Y. which manufactures Sofskin hand lotion and various pharmaceuticals and which has two important subsidiary companies in the cosmetic field, Prince Matchabelli Inc. makers of perfumes and toiletries and the Alfred D. McKelvey Co. manufacturers of Seaforth men's toiletries, has acquired the 56 year old Minneapolis mouth wash manufacturing Co. Under the transfer Vick issued stock with a current market value of over $13,000,000 giving holders of Lavoris stock 196,492 shares of Vick stock.

Preferences of Women in Purchase of Cosmetics

House-to-house salesmen outrank both drug and department stores as preferred outlets for several cosmetic items including sachets, cosmetic sets, bath salts, tablets and oils according to merchandising facts revealed in the recently published McCall's Drugs & Toiletries Purchase Diary Study.

Another finding was that 95.1% of cleansing cream purchases and 85.3% of toilet soap purchases are made by women.

When shopping for eye make-up 53.1% of women patronize variety stores; 48% prefer drug stores for their lipstick purchases; and 30.2% of women buy their rouge from department stores with an equal percentage making their rouge purchases in drug stores.

Allstadt Elected a Director of George Lueders & Co.

Louis M. Allstadt has been elected a director of George Lueders & Co. and will assist Frederick G. Buehler, executive vice president.

Gimmicks Discussed by Expert at September CIBS Meeting

The September meeting of the Cosmetic Suppliers and Buyers Assn. September 4 featured an address by P. K. Thomajan on advertising gimmicks. Each gimmick was illustrated with an actual sample that had brought good results. The meeting was well attended and many of the members were observed taking notes on some of the ideas suggested.

OBITUARY

Harry W. Heister

Harry W. Heister, associated with the firm of George Lueders & Co., passed away on August 17. He had rounded out 59 years with the company, was a director and dean of their salesmen. His father, Henry Heister, was one of the original partners of George Lueders & Co., having joined the company in 1893.

Milton Stern

Milton Stern, assistant sales manager of Magnus, Mabee & Reynard, Inc., of New York, died August 17 at the age of 63. He had been with the firm since 1924.

Wallace Erdman

Wallace H. Erdman, formerly purchasing director for the Colgate-Palmolive Co. died August 15 at the age of 65 years.

for UNIFORM PURITY
UNIFORM TEXTURE
UNIFORM WHITENESS

Experimental data and practical manufacturing experience of nearly 100 years' specialization in beeswax and beeswax compounds are at your service without cost or obligation. Write about your beeswax problems to **WILL & BAUMER CANDLE CO., INC., Syracuse, N. Y. Est. 1885** *Dept. AP*

Spermaceti—Ceresine—Red Oil—Yellow Beeswax—Composition Waxes—Stearic Acid—Hydistear

RONA™

***Natural PEARL PIGMENT Concentrates**

We have taken Nature's unique crystalline pigment guanine from the scales of fish and highly purified it specifically for cosmetic formulations.

Rona Pearl is a new and distinctive high fashion color for:
Nail Enamel—CN base
Eye Make-up—CO base
Lipstick —CO base

RONA LABORATORIES, INC.
East 21st & 22nd Sts.
Bayonne 27, New Jersey
Largest exclusive manufacturers of Pearl Essence
Plants: Maine—New Jersey—Canada

* F. D. A. approval

How to Formulate Perfumes

A New Book by E. S. MAURER

A highly practical reference guide for all who utilize perfumery raw materials. . . . A virtual library of relevant information skillfully presented for ready reference.

CONTAINS 313 PAGES • PRICE $6.50

Kindly send Check or Money Order to . . .
American Perfumer & Aromatics, Book Dept.
48 W. 38 St., New York 18, N. Y.

SPOTLIGHT News...

An all purpose household cleaner called Genie has been launched in a San Francisco market test by the Colgate-Palmolive Co.

A new non-cola drink is being marketed by the Coca Cola Co. It is called Fanta and comes in five flavors: orange, lemon, lime, root beer and ginger ale. It is being made in the company's bottling plants in Boston, Chicago and San Francisco.

Almost three quarters of the retailers in the United States do not have enough inventories of cosmetics to meet the Fall upturn in demand according to a survey by Lehn & Fink and the Econometric Institute.

The bouffant hair style is responsible for a booming sales in hair goods according to a survey by Variety Store Merchandiser. Home permanents, hair tints and dyes and hair sprays have sky rocketted. Hair sprays alone are up 280% in three years.

New violet eye make-up gives an exciting accent to Fall fashions according to Helena Rubinstein. No other shade blends so perfectly with Fall's riot of blues, greens, oranges and browns. Featuring its mascara-matic in a new violet shade and an eye shadow stick in an opalescent orchid tone the company is stressing the new shade.

A 1958 market guide for the Pacific area covering Hong Kong, the Philippine republic, Taiwan, Korea, Hawaii, Guam and other Pacific markets has been issued by the American Foreign Creditors Underwriters Corp., 253 Broadway, New York, 7, N.Y. Besides firm names and addresses each listing gives lines of business plus a capital and credit rating.

Slightly over 21,000 concerns with an indicated worth of one million dollars or more are responsible for 45% of the nation's gross sales, 39% of total employment and 48% of total salaries and wages according to the new Dun & Bradstreet Million Dollar Directory to be published January 1, 1959.

Five new colors have been added to the Jaquet Inc. line of lipsticks: petal pink, pink coral, champagne rosee, red gold and holly red. The line now consists of 11 shades.

A new subsidiary in Morocco has been established by the Procter & Gamble Co. in Casablanca. It is a subsidiary of Procter & Gamble A. G., Luzern, Switzerland.

A 100 ways to improve efficiency and save money in your office are given in a booklet issued by Manpower Inc. 810 N. Plankinton Ave., Milwaukee, Wisc. A copy may be had by writing to the company.

Toxicology and Applied Pharmacology is the name of a new publication which will be published beginning January 1959. It will publish data on food additives, drugs, chemicals etc. and will be under the editorial supervision of Dr. Harry Hays, Toxicological Research Center, National Research Council, Dr. Frederick Coulson, and Dr. Arnold Lehman, the latter being with the division of Pharmacology of the Food & Drug Administration.

A new hair dressing in stick form called "Hair Control" which is claimed by Duon Inc., Coral Gables, Fla., the manufacturer, to make hair sprays, creams and wave sets obsolete has been launched. It comes in a purse size plastic tube. It is applied by comb or brush directly to the hair.

A roll-on, antibiotic deodorant called Deodrin will be introduced in the Christmas gift shaving sets offered by the J. B. Williams Div. of Pharmaceuticals Inc. It will be included in a gift pack consisting of either shaving cream or Lectric Shave and Aqua Velva lotion.

Glyco Products Co. has been acquired by Chas. L. Huisking & Co., New York, N.Y. which will operate it under the name of Glyco Chemicals Corp. as a subsidiary.

A new nail product claimed to make manicures last two or three days longer than usual, called "Wonder Base" has been introduced by Revlon, Inc. The product is claimed to smooth out nail irregularities and enable the nail enamel to take on a higher gloss.

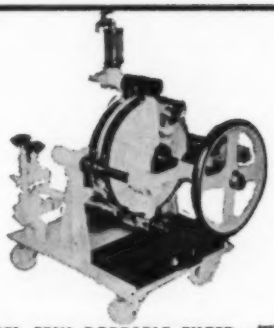
Hymes Aromatics & Import has moved to 17-23 West 60th St., New York, 23, N.Y. The telephone number is COlumbus 5-5935.

Eez Spray Powder, an aerosol foot preparation, the first item in its new Family Products line has been launched by Chas. Pfizer & Co., Inc.,

A pill to promote sun tanning while increasing the tolerance to sunlight has been launched by the Upjohn Co., Kalamazoo, Mich. The pill contains methoxsalen, which increases pigmentation of the skin.

A prize beauty show will be a feature of the National Beauty Trades Show in the Hotel Statler, New York, September 29-October 1.

FILTERS AND BOTTLE FILLERS
for the Perfumer



MODEL EBW PORTABLE FILTER—This filter is recommended for small capacity requirements. Accomodates from 4 to 8 12¼" dia. filter disks. Easy to set-up and operate.

PORTABLE VACUUM BOTTLE FILLER

Will rapidly fill small or batch lots of material at lowest cost. Fills bottles to uniform height without loss of material. Interchangeable spouts for filling shaker-type bottles to gallons.

ASBESTOS FILTER SHEETS
Various Sizes

Ertel Asbestos Filter Sheets for ultra polished brilliance are used for many fine perfumes and cosmetics. Available in 10 grades to fit all standard filters. Write regarding samples for superior result tests in your filter.

Write for Illustrated Catalog

ERTEL ENGINEERING CORP.
10 FAIR ST., KINGSTON, N. Y.
Branch Office & Showroom New York City

PERSONALITIES

Seymour Murray Kent has been appointed to the newly created post of corporate art director of Lehn and Fink Products Corp. Mr. Kent will be responsible for supervision of packaging and product styling for the company's Tussy

Seymour Murray Kent

Cosmetics, Dorothy Gray, Ltd., Ogilvie Sisters, Lehn and Fink Proprietaries and Toiletries and Export Divisions. Art departments of divisions of the company will be centralized under his direction.

Miss Isabelle G. Magnus, daughter of Robert Magnus, vice president of Magnus, Mabee & Reynard Inc., New York, was married recently to David W. Robinson II, an attorney.

Davis Factor Jr., son of Davis Factor former president of the Toilet Goods Assn. and chairman of the board of Max Factor & Co. Hollywood, Calif. is engaged to marry Miss Janet Nemer of Los Angeles.

Stuart Sherman, a director of the Colgate-Palmolive Co. has been appointed vice chairman of the United States committee for the United Nations.

Lessing Kole, founder and chairman of the board of Kolmar Laboratories, Milwaukee, Wisc. who recently underwent surgery has returned to work and is reported to be well on the road to complete recovery.

Zyg Taube has joined Anatole Robbins, Inc., Hollywood, Calif., as chairman of the board.

Samuel Goodman, vice president of Rayette Inc., St. Paul, Minn., who is an active Shriner recently arranged a coordinated fashion show and luncheon for the ladies of Osmah Shrine Temple in St. Paul.

Sam Prussin, director of new products and sales development of Aerosol Techniques, Inc., will present a paper on "Cost Substantiation of Aerosol Packaging" on the drug and pharmaceutical program of the twentieth annual forum of the Packaging Institute on October 14, in Chicago.

Roy Raskin has been appointed to the public relations staff of Max Factor & Co. and will assist Public Relations Director Bill Hardwick with national and foreign publicity and public relations activities for the firm.

Roy V. Schwab, first president of the National Wholesale Druggist's Assn., in accordance with the by-laws of the organization, will fill the vacancy in the office of President, following the death of President Richard L. Hanson.

Harold Hutchins has been named chairman of the committee which produced the daily newsletter for members of the Federal Wholesale Druggists Assn. at the annual convention in White Sulphur Springs, September 7-10.

Jesse Gilman, formerly president of Manhattan Devices Inc. has joined Rona Laboratories producers of synthetic and natural pearl essence and pearlessence pigments as technical sales representaitve in Manhattan and Bronx boroughs, New York City.

Leonard S. Brooks has been appointed general sales manager for F. Ritter & Co. His base of operations will be 2414 W. Laurence Ave., Chicago, 25, Ill. Mr. Brooks' duties are to coordinate sales and

Leonard S. Brooks

assist Ritter's representatives throughout the United States. He has been in the essential oil and flavor business for the past 25 years, both from the standpoint of laboratory research and sales.

Gerard S. Fowler has been appointed executive vice president and general manager of the Richard Hudnut Division according to John S. Hewitt, president of the Family Products Division of Warner-Lambert Pharmaceutical Co. Richard

Gerard S. Fowler

Hudnut is one of the units of Warner-Lambert's Family Products Division, the division which markets the firm's cosmetics, toiletry and proprietary drug products. Mr. Fowler was previously vice president and director of sales of the Richard Hudnut Division. In his new position, he will be responsible for the marketing of cosmetic and toiletry products sold under the names of DuBarry, Sportsman and Richard Hudnut. Since joining the company in 1924, Mr. Fowler has held a variety of sales and marketing positions with the cosmetic division of Warner-Lambert.

Robert L. Goldemberg has joined Shulton Inc. as a project leader in the toiletries research laboratories according to an announcement by Dr. Charles Kline, scientific director. He is an alumnus of Princeton University and prior to joining Shulton was a senior chemist for eight years with the Coty Products Corp.

Roy E. Webb has joined van Amerigen-Haebler Inc. and will be responsible for process development and pilot laboratory operations. For the past decade Mr. Webb has been associated with the National Aniline Division, Allied Chemical Corp. where he was a section leader in engineering research at the company's research center in Buffalo. He received his master's degree in chemical engineering from Columbia University after completing undergraduate work at the College of the City of New York and during World War II he was a captain in combat intelligence of the U. S. Army Air Force.

Paul L. Kohnstamm

Herman Bogaty

Daniel A. Flynn

Paul L. Kohnstamm, president of H. Kohnstamm & Co., Inc., has been elected to the Young Presidents' Organization. He will be affiliated with the metropolitan New York chapter. Consisting of some 1300 members who have become company presidents before the age of 40, the YPO conducts seminars at university business schools and holds an annual "School for Presidents."

Davis Factor, Sr. has been elected as a member of the board of directors of the Citizens National Trust and Savings Bank of Los Angeles. Mr. Factor holds the distinction of being the first man away from the New York area to have held the office of president of the national Toilet Goods Assn. for two consecutive terms.

Matthew Ruffle has been appointed vice president of Hazel Bishop, Inc. He will function in the area of general sales management and administration. Mr. Ruffle was formerly director of marketing with Richard Hudnut.

Emanuel Goren, manager of the Proprietaries and Toiletries division, Lehn and Fink Products Corp., has been elected executive vice president of the Merchandising Executives Club of New York. Mr. Goren had formerly served as recording secretary and a member of the club's board of directors.

Herman Bogaty has been promoted to associate research director for the Toni Co. Mr. Bogaty will be in charge of the company's research and development programs in the home waving field.

Ralph A. Hart, executive vice president of the Colgate-Palmolive Co., will serve as chairman of the Soap Division of the 53rd annual appeal of the Travelers Aid Society of New York.

Samuel Rubin, president of Faberge, Inc., has been named chairman of the Cosmetics Division of the USO Fund of New York for the 1958 Campaign.

Janet Myers Devanney has been appointed advertising and publicity director for the Colonial Dames Cosmetic Co. For the past eight years, Mrs. Devanney was publicity director of Bourjois, Inc.

Richard R. Deupree, chairman of the board, The Procter & Gamble Co., has been selected to receive the 1958 Henry Laurence Gantt Gold Medal for "distinguished achievement in industrial management as a service to the community." The award will be presented under the joint auspices of the American Management Assn. and the American Society of Mechanical Engineers at a luncheon concluding the AMA's fall personnel conference in the Georgian Room of the Statler Hotel in New York Sept 24.

Daniel A. Flynn has been elected secretary-treasurer of Lanolin Plus, Inc. Mr. Flynn was formerly financial vice president of Diversified Drug Associates.

Herbert H. Bunchman, secretary-treasurer, Plough, Inc., Memphis, Tenn., has been elected a director of the Memphis Control of the Controllers Institute of America.

Randall Mathews has been promoted to the new position of assistant brand manager for Lysol disinfectant and Hinds Honey & Almond Fragrance Cream, in an expansion of the Proprietaries and Toiletries division of the Lehn and Fink Products Corp. Mr. Mathews, a regional manager since 1957, will assist Victor A. Pizzolato in supervising distribution, marketing, advertising and promotion for both product lines.

Fred C. Hitchings has been appointed sales manager for "Genetron" refrigerants and aerosol propellants produced by Allied Chemical's General Chemical Division. Mr. Hitchings succeeds Lee D. Callans who has been named manager of the Division's Market Surveys Department. A member of the Allied Chemical organization for 24 years, Mr. Hitchings has been manager of New York metropolitan sales for General Chemical's broad line of industrial, laboratory and agricultural chemicals since 1953.

COLORS

Leeben

• FD & C • D & C
• EXT. D & C
Chlorophyll & Carotene

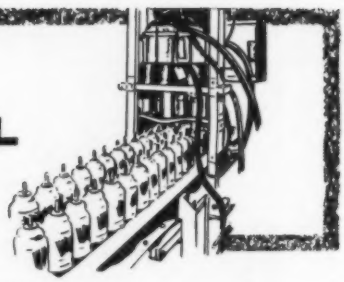
OUR LABORATORIES ARE AT YOUR DISPOSAL

"The only commodity we offer besides COLOR is SERVICE"

LEEBEN COLOR AND CHEMICAL CO., INC.
103 LAFAYETTE ST., NEW YORK 13, N. Y. TEL: WOrth 6-0330

THE EYE Buys

Guide to
AEROSOL
PACKERS



EAST

IMAGINATION • CREATION • REALIZATION

ATi

AEROSOL TECHNIQUES
INCORPORATED

Exclusively private label manufacturer of aerosol cosmetics, pharmaceuticals and chemical specialties.

Bridgeport 5, Conn. EDison 6-0176

EAST

Thomasson
OF PA., INC.

AEROSOL FILLING
for Contract and Private Label Marketers

Also Liquid Filling

Complete Research and Laboratory Facilities
Constant Quality Control

Norristown, Pa. BRoadway 5-4355

SUN-LAC INC.
"Successful through Service"
274 LAFAYETTE ST., NEWARK 5, N. J.

Aerosol Packaging
Small Runs Solicited on . . .

Cosmetics, Creams, Foams, Perfumes, Powders, Household Items, Insecticides, Industrial Products, & Plastic Sprays.

We formulate and develop new products. Quality controlled productions—bulk storage facilities, pressure & "Cold Fill" facilities. Special plan for companies requiring national distribution. We supply samples and do experimental work at no charge. Write or phone MA 3-7727 for full information.

Powders—Liquids—Emulsions

MID-WEST

Symbol of
Experience in Aerosol
Development & Packaging

for Aerosol "Know-How" Call
CONTINENTAL FILLING CORPORATION
123 N. Hazel • Danville, Illinois

If you haven't got a personal copy of
"COSMETIC EMULSIONS 1958" . . .
. . . here's your chance to get a COMPLETE reprint of the feature.

Each article is reproduced in full . . . with all of the details on research, procedures, formulae, and equipment—exactly as it appears in the June "Perfumer."

To get your copy, send 50¢ to

Moore Publishing Company, Inc., 48 West 38th Street, New York 18, N.Y.
Quantity prices are also available.

Robert Horsey, vice president of Givaudan-Delawanna, has the distinction of being the first BIM to make a hole in one at the July tournament of the association at the Winged Foot Country Club, Mamaroneck, N.Y. So far as is known he is the only BIM ever to make a hole in one in any of its tournaments. Another honor came to him September 13 when he was elected a member of the executive committee of the D. C. A. T. Section of the New York Board of Trade for a three year term.

Miss Bonne Bell, vice president of Bonne Bell Inc., Cleveland, Ohio, will be the guest of honor at a press party in the St. Regis hotel, New York, September 29, the day preceding her appearance as guest speaker at the luncheon of the Cosmetic Career Women. Bonne Bell Inc. was named after Miss Bell by her father, President J. G. Bell, when he founded the company.

Dr. Alfred Ofner, Hoffman-LaRoche Inc. Nutley, N.J., is enjoying a well earned vacation in Europe.

Harry Gershweir has been appointed regional manager of metropolitan New York by the Almay cosmetic division of Schieffelin & Co.

Northam Warren Sr., founder of the company that bears his name was host at a recent party in Canada to Erwin Ruschmeier and his wife who are making a tour of the United States and Canada. Mr. Ruschmeier is director of International relations for the House of 4711. Mr. Warren is head of the company in Canada which distributes the line of eau de cologne and other toiletries in that dominion.

Pierre Bouillette, Givaudan-Delawanna, Inc., has returned from a trip to Europe, which included an extended stay in Paris.

Henry van Ameringen, son of Arnold van Ameringen of van Ameringen-Haebler Inc., is expected to return from a European trip October 1.

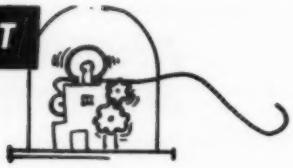
Gerald Cannon has joined the Northam Warren Corp., Stamford, Conn., as assistant general manager.

Jules Winarick, president of Ar Winarick, Inc., a subsidiary of Lorr Laboratories, New Brunswick, N.J., was recently married to Miss Jeanne Fox Orr.

Gert Keller, president of the Essential Oil Assn. of the U. S. A. and also president of Schimmel & Co., New York, has agreed to serve as chairman of the Essential Oils and Extracts Division of the 53rd annual appeal of the Travelers Aid Society of New York. Travelers Aid which is a private, non-sectarian agency and receives its support entirely from voluntary contributions, gives immediate, confidential help free of charge to anyone in trouble away from home. In 1957 the Society gave preventive help to 70,552 persons.

William Schmick has been appointed New Products manager of the Household Products Division of Colgate-Palmolive Co.

MARKET REPORT



High Prices – Buyer Resistance

Few price movements are taking place in essential oils and aromatic chemicals, and the market generally fails to show any definite trend. Underlying conditions are firm, however, although a considerable amount of buyer resistance prevails in some items because of high prices. This is particularly true in oils such as geranium, sandalwood, and vanilla beans. Passing of the summer season is expected to reduce pressure on the demand for citrus oils, citrates, and specialty items used in beverages and confections.

PRICE CHANGES

ADVANCES	CURRENT	PREVIOUS
Gum Styrax		
Asiatic	* $5.25	$3.25
Honduran	3.75	3.00
Oil cumin	12.75	12.25
Brucine, oz.		
Alkaloid	* 1.20	0.75
Sulfate	* 1.15	0.68
Oil clove leaf	1.05	1.00
DECLINES		
Oil rosewood (bois derose)	$2.00	$2.05
Oil cedarleaf	2.75	3.10
Oil citronella, Formosan	0.60	0.63
Oil palmarosa	3.75	4.25
Oil guaiac wood	0.85	0.90
Oil lemongrass	1.00	1.10
Citral	3.25	3.50
Aldehydes		
C-14	5.75	6.40
C-16	5.15	5.75
C-18	10.65	11.00

Prices per pound unless otherwise specified. *Nominal

STYRAX PRICES SOAR—

Both the Asiatic as well as the Honduran varieties of gum styrax advanced sharply in price. The advancing market was led by Asiatic gum from Turkey, the article rising from a little more than $4 per pound to over $5. The latter quotation became largely nominal, however, applying to only scattered unsold parcels that had been lying around this market. New and higher prices for Honduran styrax range from $3.75 to $3.85 per pound.

ALDEHYDES DECLINE—

Aldehydes C-14 and C-16 have turned lower under the influences of greater sales pressure. The C-14 was reduced by 65 cents per pound to the basis of $5.75, while the decline in C-16 of 60 cents brought the article down to $5.15 per pound. Aldehyde C-18 also lost ground falling to the basis of $10.65, or 35 cents per pound below the previous quotation in effect.

GLYCERIN PRICES SEEN HOLDING—

Glycerin prices are expected to be maintained at current prices for the balance of the year. For a time, or in January, when stocks were at a high level of 81 million pounds, there had been some talk of a possible break in the market for refined material particularly in view of the recession in general business. Since that time, stocks have been gradually dropping. At the end of June they amounted to 63,324,000 pounds in contrast to 69,548,000 pounds at the end of May. A stock of about 60 million pounds is reported about normal. Based on the current rate of consumption, current stocks are believed to be equal to a three months supply.

MINT OIL RISE HALTED—

The hardening price trend in mint oils appeared to have been halted as distillation of new crops finally got underway. The producing season came rather late this year however and it is quite possible a leveling off in the upward price curve may prove only temporary. Less acreage has been reported this year, and excessive rains in many areas of the Midwest may possibly have an adverse influence on the outcome of the new crop of both spearmint and peppermint.

OIL CUMIN SCARCE—

Oil cumin is scarce with reports from primary centers suggesting a continued shortage of material and firm prices. Spot quotations are virtually nominal in the absence of firm offerings from primary markets. Reports state that producers have suffered two successive years of crop failure. New nominal spot prices range from $12.50 to $13.50 per pound.

OIL BERGAMOT FIRMS—

The outlook in oil bergamot remains strong with occasional odd parcels previously available at below generally quoted prices of $13.50 to $14 per pound having disappeared. Advices from Italy state that the Consortium has announced that there is no more bergamot oil available containing less than 40 percent ester.

QUASSIN COST UNCERTAIN—

Cost of the new substitute quassin for the alcohol denaturant brucine, is highly uncertain since production of the item has largely been on an experimental scale. Prices ranging from $1.80 to $6 an ounce have been indicated for quassin depending on the strength of the material. The Alcohol and Tobacco Tax Division of the Bureau of Internal Revenue recently issued Circular No. 58-11 which permits quassin to be used as a substitute denaturant for brucine in specially denatured alcohol formula 40. Formula 40 alcohol goes into hair lacquers which has been steadily increasing in consumption.

SUPPLY SQUEEZE IN VANILLA—

While there has been considerable buyer resistance to the high prices prevailing on vanilla beans there is nothing in overall supply position that tends to suggest any weakening in prices between now and early next year. The crop in Mexico has been steadily shrinking over the past few years due to broadened activity in the petroleum industry, and new crop prices for Bourbon vanilla beans are expected to remain high based on prices paid by curers for this years crop of green beans. Unsold lots of beans from last season's crop are reported to be far short of anticipated requirements between now and the period when new crop is ready for export after the turn of the year.

ORANGE AND LIME OILS SCARCE—

Passing of the summer vacation period is likely to reduce the pressure on demands for orange and lime oils for the account of the beverage trade but the supply of both oils promises to remain tight. New crop of lime in Mexico was not only late this year but heavy demands for fresh fruit especially for Europe as well as a smaller crop all suggest a strong market in lime oil in the months ahead.

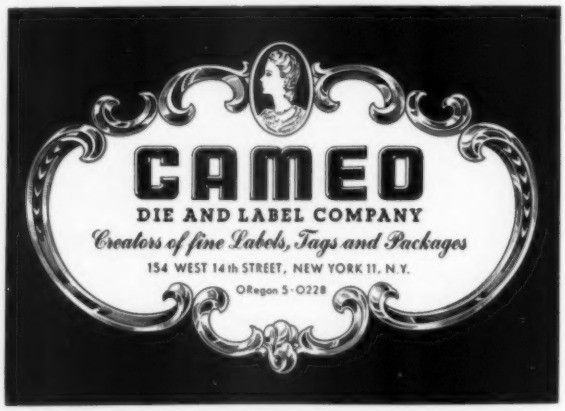
MOULDS
for
LIPSTICKS
MASCARA
SUPPOSITORIES
STYPTIC PENCILS
and
DIES
for
ROUGE
COMPACT POWDER
Write for Catalog
A. CAVALLA, INC. 163 WEST 18TH STREET, NEW YORK, 11, N.Y.

Aromatic Chemicals
FOR PERFUMERY AND FLAVORS
Iso Propyl Quinoline • Isobutyl Quinoline
Ethyl Anthranilate • Butyl Anthranilate
Linalyl Anthranilate • Linalyl Isobutyrate
FAIRMOUNT
CHEMICAL CO., INC.
600 Ferry Street Newark 5, N. J.

WE BUY FOR CASH
CLOSE-OUTS • SURPLUS
Bottles • Caps • Jars • Containers • Chemicals • Closures
Cosmetics of any Descriptions
Also Business Small or Large . . .
UNIVERSAL OUTLET CO.
1 E. 15th St. • New York 3, N.Y.
Telephone Oregon 5-9444—
Oregon 5-8568

1905 — 1958
FIFTH AVENUE
PROTECTIVE ASSOCIATION
A
NATIONALLY USED
COLLECTION AGENCY
covering the U. S. through
its own personal representatives
142 Lexington Avenue New York 16, N. Y.
(Our Own Building)

TL Beeswax
• PURE WHITE
• EXTRA QUALITY
• ABSOLUTELY PURE
• ABOVE U.S.P. STANDARDS
• Samples will gladly be sent on request—at no obligation
Serving the Trade for 106 Years
THEODOR LEONHARD WAX CO., INC.
HALEDON, PATERSON NEW JERSEY
Western Distributor: A. C. Drury & Co., 219 E. North Water St., Chicago, Ill.



PERFUMES AND THEIR PRODUCTION
by E. S. Maurer
A highly practical book for all engaged in the utilization of perfumery raw materials by a recognized expert of many years of experience. Part I covers the perfumer's training and approach, laboratory techniques, formulating, perfuming soaps and cosmetics and other products and top notes. Part II covers perfumery raw materials in a simplified way so as to save the user from the onerous task of investigation, referring, comparing and contrasting raw materials. A most useful reference and day to day guide.

American Perfumer & Aromatics Book Dept.
48 West 38th Street, New York 18, N.Y.
This book is published by United Trade Press Ltd. Contains 313 pages. Price 6.50. Kindly send check or Money Order.
NAME _____
ADDRESS _____
CITY _____

CLASSIFIED ADVERTISEMENTS

Rates per line, per insertion: Situations Wanted and Help Wanted, 50c. All other classifications, $1.00. Please send check with copy.

FOR SALE

FOR SALE: One year's supply of latest information on market prices, new formulations, sales promotion techniques. Delivered to you on regular monthly schedule. Total investment for 12 months: $5.00. Potential return: Unlimited. Address: Circulation Dept., American Perfumer & Aromatics, 48 W. 38th St., New York 18, N. Y.

HELP WANTED

ORGANIC RESEARCH CHEMIST

Organic research chemist, Ph.D. level, must have strong interest in synthetic bench work on terpenes, above average background, no previous industrial experience necessary. Leading, old established firm in New York City area. Generous retirement, insurance and medical plans.

Application will be held in strict confidence. Our employees know of this advertisement. State salary requirements and send resume to Box No. 3175. American Perfumer & Aromatics, 48 W. 38 St., New York 18, N.Y.

Noville Essential Oil Company, Inc.

SALESMAN FOR METROPOLITAN AND NEARBY AREAS. A real opportunity for man familiar with the selling of quality compounds and basic raw materials, to grow with a growing concern. 1312-Fifth Street, North Bergen, N.J. UN 7-9080.

CHEMIST COSMETIC, experienced in the manufacture of Toilet Preparations. Excellent opportunity for qualified man willing to relocate in Binghamton, N. Y. Send resume with complete information, including salary requirements.
Write Box 3173, AMERICAN PERFUMER & AROMATICS, 48 W. 38 Street, New York 18, N. Y., for confidential interview.

SALESMAN, Perfume compounds, essential oils, aromatic chemicals, flavors. Experience essential. Metropolitan New York territory. Sell complete line of long established house. Reply full details Box 3178, AMERICAN PERFUMER & AROMATICS, 48 W. 38 Street, New York 18, N. Y.

MISCELLANEOUS

"RONDO ARPEGGIATO." A distinctive perfume compound of great elegance. A sparkling gem of beauty and sophistication, with a quasi universal appeal. Very exclusive. Sample and price on request.

DI SALVO FINE PERFUMES
1422 Chestnut St., Phila 2, Pa.

SITUATION WANTED

PERFUMER-CHEMIST with long experience in all phases of perfumery, available for part time work. Will consider confidential and independent study of any perfumery problem of any magnitude on flat fee or time basis. Write Box 3177, AMERICAN PERFUMER & AROMATICS, 48 W. 38 St., New York 18, N. Y.

PROFESSIONAL SERVICE

"L'ART de la PARFUMERIE par EXCELLENCE"
And its Application to the Industry
DR. JEAN JACQUES MARTINAT
PERFUMER-CHEMIST CONSULTANT

Perfumes
Cosmetics
Toilet Articles
Soaps
Flavors

Creations of Highly Original Perfumes
Duplications of Most Difficult Fragrances
Unique Kind of Professional Services.

Kindly Inquire
333 WEST 52ND STREET, NEW YORK 19, N. Y.
TEL. PLAZA 7-3861

RESEARCH AND DEVELOPMENT
Cosmetic Formulation and Improvement

SNELL

Toxicology, skin-irritation studies, analyses and formulations, soap and syndet evaluations. Free booklet: "How to Develop Successful New Cosmetics."

FOSTER D. SNELL, INC.
29 West 15th St., New York 11, N. Y.
WAtkins 4-8800

LEBERCO LABORATORIES
Irritation Studies—Sensitivity Tests
Toxicity and Safety Tests on
Shampoos—Cold Wave Lotions—All Cosmetics
Pharmaceutical and Cosmetic Research
Hormone Assays—Bacteriological Studies
127 HAWTHORNE ST., ROSELLE PARK, N. J.

Miniature Perfume Bottles
from ⅛ dram to ½ oz.
Handmade Glass Novelties • Miniature Glass Funnels
SPECIAL ORDER WORK
KENBURY GLASS WORKS
132 W. 14th Street New York 11, N. Y.

Carl N. Andersen, PhD
Consulting Chemist
Cosmetics, Soaps and Synthetic Detergents
OFFICE AND LABORATORY
150 South Highland Avenue, Ossining, N.Y.
Phones: Wilson 1-1550; Wilson 1-7959

Index OF ADVERTISERS

Abbe Engineering Co. ..... —
Aerosol Techniques, Inc. 80
Alpine Aromatics, Inc. ..... —
American Aromatics, Inc. 30
American Cholesterol Products, Inc. 48, 50, 52
American Lanolin Corp. ..... —
Andersen, Carl N. 83
Ansbacher-Siegel Corp. 24
Archer-Daniels-Midland Chemical Products, Inc. ..... —
Aromatic Products, Inc. 8
Atlas Powder Company ..... —
Avon Products ..... —

Barr & Company, G. ..... —
Bertrand Freres 4
Bios Laboratories, Inc. 72
Boake, Roberts & Co., Ltd., A. 29
Bopf-Whittam Corp. ..... —
Builders Sheet Metal Works 74
Bulgarska Rosa ..... —

Cameo Die & Label Co. 82
Camilli, Albert & LaLoue, Inc. 84
Carr-Lowrey Glass Co. 68
Cavalla, Inc., A. 82
Charabot & Co., Inc. 25
Chiris Co., Antoine 18
Citrus & Allied Essential Oils Co. .. 28
Classified Advertisements 83
Continental Can Company, Hazel Atlas Glass Division ..... Insert 61
Continental Filling Corp. 14, 80
Croda, Inc. 15

DeLaire, Inc. ..... —
Descollonges, Inc. 72
Distillation Products Industries, Div. of Eastman Kodak ..... —
Dodge & Olcott, Inc. .. Inside Back Cover
Dragoco, Inc. 65

Emulsol Chemical Corporation ..... —
Ertel Engineering Corp. 77
Esperis, s.a. ..... —
Esrolko, Ltd. ..... —

Fairmount Chemical Co., Inc. 82
Felton Chemical Co., Inc. ..... —
Fifth Avenue Protective Assoc. 82
Firmenich & Co. ..... Insert 67
Fisher Chemical Co., Inc. ..... —
Fluid Chemical Co., Inc. ..... —
Foilcraft Printing Corporation 28
Fritzsche Brothers, Inc. ... Insert 41-44

General Chemical Div., Allied Chemical Corp. 6-7
Gifford-Wood Co. ..... —
Givaudan-Delawanna, Inc. .. Insert 20-21
Glidden Company, The ..... —
Goldschmidt Chemical Corp. 59

Halby Products ..... —
Hazel Atlas Glass Division, Continental Can Company .. Insert 61
Heine & Company 62
Heyden-Newport Chemical Corp. ... 16
Hoffman-LaRoche, Inc. ..... —

Ising Corporation, C. E. ..... —

Katz & Co., Dr. Alexander, Div. of Ritter & Co. 24
Kenbury Glass Works 83
Kessler Chemical Co., Inc. 60
Knapp Products, Inc. 28
Kohnstamm & Company, Inc. ..... —

Lambert Engraving Company ..... —
Lanitis Bros., Ltd. ..... —
Lautier Fils, Inc. ..... —
Leberco Laboratories 83
Leeben Color & Chemical Co. 79
Leonhard Wax Co., T. 82
Lueders & Co., George ..... —

Malmstrom & Co., N. I. ..... —
Malmstrom Chemical Corp. ..... —
Martinat, Jean Jacques, Dr. 83
Maryland Glass Corp. 22

Old Empire, Inc. 24
Owens-Illinois Glass Co. ..... —

Parento, Inc., Compagnie 17
Parsons-Plymouth, M. W. ..... —
Penick & Co., S. B. ..... —
Perfumery Associates, Inc. 73
Polak's Frutal Works ..... —
Polak & Schwarz, Inc. ..... —
Polarome Manufacturing Company, Inc. ..... —
Powr-Pak, Inc. ..... —
Protean Chemical Corp., The ..... —

Reed Research Corp., The 12
Reheis Co., Inc. 5
Rhodia, Inc. ..... —
Richford Corp. 53
Risdon Manufacturing Co., The Back Cover
Ritter & Co., F. 24
Rona Laboratories, Inc. 76
Roure-Dupont, Inc. ..... —

Schimmel & Co., Inc. ..... —
Scovill Mfg. Co. ..... Insert 31
Shulton, Inc. 32
Snell, Foster D. 83
Sonnebron Sons, Inc., L. ..... —
Sun-Lac, Inc. 80
Synfleur Scientific Labs, Inc. 2
Syntomatic Corp. ..... —

Thomasson of Pa., Inc. 80
Tombarel Products Corp. 23

Ungerer & Co. ..... Inside Front Cover
Universal Outlet 82

Van Amerigen-Haebler, Inc. 26-27
Vanderbilt Co., R. T. ..... —
Van Dyk Company, Inc. ..... —
Verley & Company, Albert 13
Verona Chemical Co. 11

Webb & Co., Inc., R. D. 72
Whittaker, Clark & Daniels ..... —
Will & Baumer Candle Co., Inc. 76

Rose
15 E. 48th St., New York

"MAXIMAROME"

"Naturals"

PLAZA 3-6070

CAMILLI, ALBERT & LALOUE, INC.

Jasmin
Grasse, France Tel: 870

It stands apart...

Essentially for you

D&O
ESTABLISHED 1798

Our 159th Year of Service

flavor bases
dry soluble seasonings
essential oils
aromatic chemicals
perfume bases

because its color is the most brilliant, its texture the richest, its form the most perfect. Even among the rare and the beautiful, one always stands apart, expressing in nature's own language life's unending search for the ultimate. Vibrant, lovely, diversely fragrant and alive, flowers represent the primal perfume, the poet's joy, the lover's offering. Yet even in these favorite children of nature, some are more perfect than others . . . and like a D&O perfume, will always stand apart. In a room filled with the myriad scents of a dozen rare fragrances, one, like the finest flower, will command the field. That one will be D&O!

Technical assistance available on your premises.

DODGE & OLCOTT, INC.

180 Varick Street, New York 14, N. Y.

Sales Offices in Principal Cities

New, Sales-Enchanting
Aerosol Perfume Dispenser

RISDON

"Mini-Mist"™

Refillable Container

Holds 250 to 300 Metered Sprays

Lipstick-size (2⅞" long x ¾" diam.) luxury container refilled by changing fragrance cartridge. ✻

Glamorous outer cases available in gold, silver & black finishes with a wide variety of opulent, machine-engraved patterns or in the elegant simplicity of smooth polished metal. ✻

Inner cartridge holds about 2¼ drams in a seamless tube of aluminum or stainless steel topped by the Risdon patented metering valve and actuator. ✻

RISDON'S "Mini-Mist" is the only purse-size aerosol perfume package with all components manufactured and finished by one company. ✻

Metered Spray, Convenient Size and Corrosion-Proof features make the RISDON "Mini-Mist" ideal for aerosol *PHARMACEUTICALS*, too. ✻

Write or phone for further information, samples and prices.

THE RISDON MANUFACTURING CO. • Naugatuck, Conn.

Quality Lipstick and Perfume Containers and Aerosol Valves